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DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. V.

BOSTON, JANUARY, 1853.

NO. 1.

RAYNOLDS & NOURSE, PROPRIETORS.
OFFICE....QUINCY HALL.

SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

THE NEW YEAR.

CHARLES LAMB, in his volume of "*Elia*," says, "Every man hath two birthdays; two days, at least, in every year, which set him upon revolving the lapse of time, as it effects his mortal duration. The birth of a new year is of an interest too wide to be pretermitted by king or cobbler. No one ever regarded the First of January with indifference. It is that from which all date their time, and count upon what is left." It is proper, then, to make it a passing place, from which to look at events which have passed, as well as to summon before us something of the probable future. Proper, standing on this point and contemplating the portion of our days that has mingled with the untold years which have rolled away behind us, that the heart should be touched, and awakened to new emotions of gratitude. In the sombre December afternoon, with barren fields, and leafless trees around them, how many witness the setting sun, with the mental exclamation, "Shall I behold thee again, descending with the dying year!" or start at the solemn peal of the bell as it rings out the old year. Lamb says he never heard it "without a gathering up of his mind to a concentration of all the images that had been diffused over it for a past twelve-month; all he had done or suffered, performed or neglected—in that regretted time."

But the *lapse of time*, well employed, should be no cause of regret. We hail the corn and fruit harvests with joy; they are no more of special appointment than that we ought to become ripe with good deeds and fruits and be gathered home ourselves. The sum of human duty is to *act well our part*—this done, the lapse of years and the trial of life should fall on the heart as the soft rain on the flinty rock; it makes an impression, to be sure, but so silent and gradual as to be almost imperceptible.

It is no idle uttering of the heart, when we say that we wish all "*A Happy New Year*." If in the association which has grown up between us,

you have enjoyed the reading, as we have the gathering, of these pages, the connection has been a most happy one. You have constantly strengthened us by timely words of encouragement, by the constant communication of your experiences, and theories and deductions from them in your farm operations, and by the most liberal, substantial, and prompt aid in the pecuniary affairs of the establishment. Your writings, many of them fresh from the experiments of the fields, have given these columns their chief value, and they must continue to do so, or they will lose that directness and force which they have already attained by your judicious aid. But with more experience in the great art, with a better knowledge of the wants of the farming community, we shall draw from our own stores and the recorded wisdom of the fathers in the art, with untiring application. Not feeling strictly confined to agricultural books, papers, or discussions for illustrations, we shall feel justified in collecting from the busy walks of commerce, the mechanic shops or laboratory of the chemist, such helps as will elucidate the subjects before us. Waifs from the wayside will be gathered in, whether straying from our own political or religious papers, or wafted across the Atlantic from the experienced farmer in the old countries.

Among the favorable changes which have taken place in the estimation in which farming is held, as an occupation, there is one of much importance, and which is calculated to draw into it many earnest and inquiring minds, and thus soon to produce distinguished men. It is, that *Agriculture now has a literature*. Some of the pleasantest books that have been issued for a few years past have been upon the subject of agriculture and its kindred branches. These works have required more patient research and investigation, and more of the higher powers of the mind to produce them, than almost any other kind of literature. They certainly stand side by side with the best works on astronomy and geology, and as far surpass in merit

and value the millions of volumes of the current literature, as the skilful cultivation of the earth is of more importance than the skilful playing of a game of foot-ball. Without going back to the ancients, who seem to have been well-informed in terra-culture, but as a general thing, knew little of the atmospheric influences upon crops, or of the importance of mineral manures, we will mention a few of the modern writers who have devoted their thoughts to the cultivation of the earth, and added dignity, grace and interest to the pursuit. Sir Humphrey Davy's lectures on agricultural chemistry were commenced before the Board of Agriculture in England as early as 1802, but never published till 1813, and to this day are scarcely known to one in a thousand in this country. Loudon's voluminous works are monuments of learning as well as of usefulness. Johnston's agricultural chemistry, Boussingault's Rural Economy, Stephens's Book of the Farm, and Rogers's Scientific Agriculture, are full of the most useful and practical information.

But there is another, and if possible, still more attractive phase in the literature of agriculture, of which Duncan's Sacred Philosophy of the Seasons, and Hunt's Poetry of Science, are representatives. While the first class enters into the great laws and operations of Nature, showing us how to subdue the wilderness, gain fertile fields, and cover the hills with flocks, the latter analyzes these laws and illustrates the goodness and wisdom of God in the beautiful arrangements of His creation. These show *the Poetry of the great art*; and to a mind untainted by morbid sensibilities, they have an inexpressible charm. They unravel a thousand mysteries in the grass of the field; or the trees of the forest,—in the drop of water that hangs and trembles on the petal of the flower, or the rugged rock on which it is soon to fall. They show that in agricultural employments there is room for the exercise of all the high and noble faculties of the mind. If the vocation has become one of drudgery, it is because *the mind* is slavish and dull, and not that the subject is not endowed with all the inherent qualities of beauty and grandeur. To the student, this class of literature will possess many pleasant attractions, more than compensate for the unpoetic part of farm work, and draw numbers away from the crowded professions. This is a feature full of encouragement.

We do not mean to say that heretofore agriculture has had no literature; for even among the ancients there were a few who seemed to embrace within their comprehensive grasp most that is known to us now. But that in this age the subject has been brought into well-defined and scientific principles, which are becoming widely-diffused among the masses who are occupied in the cultivation of the earth. At no period has there probably been more active minds engaged on any topic,

than may now be found on the subject of farming, including all its various branches. For the next half century, at least, it promises to be the popular profession; and as our national safety and continuance depends on our being an agricultural people, producing within ourselves, as far as possible, the means of supplying our own wants, we are glad to see the young and zealous engaging in its healthy and ennobling pursuits. And while we urge upon them, the more modern literature of the farm, we would by no means exclude the Georgics, the writings of old Cato, Columella, or those who have occasionally appeared and written on the subject since.

With regard to new plans in the prosecution of our enterprise, we have scarcely a suggestion to make. The NEW ENGLAND FARMER is already established on a firm basis. Its publishers will spare no reasonable expense to make it hereafter what the farmer needs, in doctrine and spirit, and in such a becoming style in its appearance as shall do no discredit to the great improvements in the Art of Printing.

We have no important changes to announce—we contemplate none. Our Associate Editors will remain in the harness and fill their parts with their accustomed promptness and ability.

One fact we will mention before we close this, our first talk with you in the New Year. Out of the thousands of communications, (sometimes amounting to scores in a day) which have been received during the past year, in relation to all the business of the establishment, *there has not been one* finding fault with our course, or ordering a discontinuance from motives of ill-will or dissatisfaction. The mantle of your charity has fallen over our errors as silently as the night-dew upon the flowers.

And now may He who sustains us, each in his position, grant us another year of usefulness and kindly intercourse with each other.

A VALUABLE BOOK OF REFERENCE.

Some of the characteristics of the *Monthly Farmer* are,—

1. The elegant manner and convenient form in which it is printed; making a handsome volume for the library when bound.
2. The expensive engravings which illustrate the stock, plants, fruits, flowers, machines, buildings and fences which are described in its columns.
3. The absence of long catalogues of premiums and programmes, which are only of temporary interest.
4. Its articles spring from leading principles in the art of agriculture, and will, therefore, be as valuable to the learner any future year, as at the present time.
5. Its writers are nearly all men of practical acquaintance with the business of the farm.

6. Some of its writers are men of profound learning in the various arts and sciences, and particularly in chemistry, in its relations to agriculture.

7. The matter which has been collected and printed with so much care, is made easily available by a full and accurate index to the articles, and to the illustrations and names of correspondents; so that no time is lost in referring to anything which has been presented during the year.

These are some of the characteristics which stand out prominently in the work, and must be marks for commendation by every reader.

For the New England Farmer.

GREAT YIELD OF CARROTS.

GENT. :—I wish to call your attention to the statement of Dr. Cook, of Wendell, in relation to his manner of raising carrots. He stated to me when sowing them that he should do *great things* in the carrot line, but I had entirely forgotten what he said, until I saw his statement in the *Republic*. We do not consider the town of Wendell one of our best towns for good land, by any means; on the contrary, we regard it as a rough, hilly town with a good deal of poor land.

LUCIUS COOK'S STATEMENT.

The subscriber, a member of the Franklin County Agricultural Society, submits the following statements relative to the cultivation of a patch of carrots raised by him the current year.

Said carrots were raised on Wendell Hill, in said county, on the place whereon said applicant now lives. The exact quantity of land was three-fourths of an acre, and the number of bushels, or baskets, six hundred and fifty-one; and the number of tons, sixteen. This number of tons was ascertained by weighing four or five loads on the hay scales, as they were drawn from the field, and dividing the sum of their weight by the number of bushels or baskets, and finding them to average fifty pounds.

The land on which these carrots were raised had been mowed for eight years prior to 1850, when it was planted with potatoes, nearly all of which were destroyed by the disease, and were not worth half the cost of harvesting.

In 1851 the land was planted to corn, which was much damaged by worms, and afterwards set out to *Ruta Bagas*, which grew well and yielded a fine crop, but having no animals that would eat them except horses, they were kept through the winter in a cellar, and then thrown out for manure—the entire crops on the land not paying the expense of cultivation by one-half. On or about the 20th of May, 1852, the land was sowed in drills 18 inches apart to carrots, by a machine bought of Mr. Wm. Elliot, for the sum of three dollars and twenty-five cents, the land being first prepared by deep plowing with a common plow, then raked and levelled—about thirty loads of horse manure being spread on the land before plowing. The labor of preparing the land, sowing the seeds, cultivating and harvesting the crop, I contracted for at the commencement, for the sum of *seventy-five dollars*, which seemed to me and others as an extravagant price, but as some stones were to be removed in the job, I consoled myself with the belief that I might

stand it "just this once." The crop has just been harvested.

As to the value of the carrots I have always believed them worth as much as oats, by the bushel, to feed to horses, which are the only animals I keep. Four or five tons of them I have sold at from \$12 to \$15 per ton; at \$12 I could sell them all any day, and the sum would amount to \$192. Add to this four dollars, a sum for which I sold the tops as they lay in the field, and four more dollars which I hope to get as premium, and the sum would amount to \$200. Deduct from this \$75 paid for labor, and \$25 more for the cost of seed and my own care and skill—the last being a charge I make from habit—and it will leave \$100 as the net income from the three-fourths of an acre.

Wendell, Nov. 15, 1852.

L. COOK.

THE SEASON.

On the 5th of Dec. last year, the ground had been frozen for several days, and had thawed but slightly during the middle of the day, so that all about this region of country the roads were hard, and nearly as smooth as plank roads. The 6th was bright and pleasant, but cold. On the 7th it rained a little. The 8th was moderate. On the 10th the roads were still smooth, and locomotives could have run finely on the common roads. At sunrise on the 11th, the thermometer stood at 12° above zero. Sunday, the 11th was pleasant; it commenced snowing early Monday morning, and about 5 inches fell during the day. Tuesday, the 16th the sleighs were running briskly. On Wednesday, the 17th, at Concord, 20 miles from Boston, one thermometer in the village stood at 20° below; another, a little north of the village, at 17°, and one north-west on higher ground at 10° below! There were then deep snows, good sleighing and stern winter weather for many weeks.

This year, on the 5th, the weather was mild and pleasant; the farmers were plowing, making wall, getting out manure, clearing meadows, and doing any of the autumnal work of the farm. The grass was green in the fields, where many cattle were grazing, and young cattle were still supporting themselves in the pastures.* A drizzling rain fell during a portion of the day, and similar weather prevailed until the 8th; that day was bright, warm, and beautiful. So were the 9th and 10th. On the 11th, there was a heavy fall of rain with east wind. It cleared off during the night, the wind hauled into the north and Sunday, the 12th, was a cold, bright morning with a clear, bracing atmosphere. Monday was damp and cool in the morning. At one o'clock it began to snow, and continued until dark, but only about half an inch fell. Tuesday, the sun rose clear, but it was not warm enough to thaw the snow. Wednesday, the 15th, was the coldest day up to that date. On the

*Pansies, or Lady's Delights, were in bloom in our garden, and in the vicinity we heard of rose bushes in full leaf with perfect blossoms.

morning of the 16th the thermometer stood at 10° above, a little before sunrise. Last year, it will be observed, it stood at 10, 17 and 20° below, at different points within a circuit of a mile, at Concord, Mass.

For the New England Farmer.

THE USE OF GUANO.

MR. EDITOR:—As *Peruvian Guano* has been used in New England only to a very limited extent as a fertilizer, and as every scrap of intelligence upon the subject is now of great interest and importance to the practical farmer, I send you for publication the following extract from a letter recently received from a gentleman in Virginia, who has very successfully used that article on the old, worn-out lands in that State. What is necessary to restore the exhausted soils of Virginia, is, *mutatis mutandis*, equally necessary to the same soils in Massachusetts: and as it regards the expense, guano, at fifty dollars the ton, is actually cheaper than manure at six dollars the cord. The extract which follows explains itself.

Walham, Dec., 1852.

D. C.

"You ask, is guano the best and most economical manure for hay and garden vegetables?" My own trials of it have chiefly been on the field crops of this region, namely, corn, wheat and clover. The effects of it on those crops are most admirable, as well as in permanently improving the soils. I have also applied it to my garden, and have used it as a top dressing to herdsgrass, but I cannot say that the effect on the grass or garden vegetable was very marked. Some friends of mine, however, have described its action on garden vegetables and on timothy as most excellent, and I have no doubt it is so.

I suppose if a new garden is to be made on poor land, it would be necessary to use vegetable manures as well as guano, to get the soil into the best state for culinary vegetables, or in fact for any kind of crop. Guano is composed chiefly of the azotised compounds and phosphates. A good, rich soil contains, in addition to these ingredients, the organic matter of vegetables. I find my fields constantly improving, as the growth of clover and all kinds of grass and weeds is promoted by guano.

We have in this part of our State various soils, namely, sandy and gravelly loams, stiff white clays, and the red clays. On the hard and gravelly loams, and on the white clays, the effects of guano are truly admirable, and also is on the pale red clays. On the dark red clays, I have been informed that its effects have not been so marked. If you wish to use it as a top dressing to grass land, you had better mix it with ground plaster of Paris, in the proportion of one part of plaster to two of guano. This tends to fix the volatile ammonia, and also furnishes a small quantity of lime to the soil. When applying guano to any crops at the time of planting, it should be plowed or harrowed in, two or three inches in depth, and should be broadcasted, and may be in quantity from one hundred to three hundred pounds to the acre.

My own belief is, that guano is the cheapest fertilizer, and the greatest boon ever conferred on a poor country. I doubt if it will ever fail on any poor lands, and think that you will not err in applying it to any such."

For the New England Farmer.

PROFITS OF FOWLS.

MR. EDITOR:—There has been an increasing interest taken in the subject of poultry, for the last few years. I have watched with interest for a result which is now realized, viz., that native fowls are more profitable than other breeds. There have been many statements made of expense and income from a stock of native fowls, invariably showing a profit; whilst I have never seen, if memory serves me right, but a single statement of fancy breeds, and that gave a loss. I saw in your paper of December 18, an account of the farmers' meeting in Concord, showing conclusively that poultry raising and egg-producing is profitable. I, too, would cast in my mite to serve the common cause.

The following is the account with my fowls one year, commencing Dec. 1, 1850.

On hand, 4 roosters and 74 hens and pullets, worth 50 cts. each.	
They consumed 41 bushels 12 qts. northern corn.	\$35.99
Do. 31 bushels 21 qts. flat corn.	22.16
Do. 200 lbs. scraps.	3.32
Interest on the worth of fowls.	2.24
Less worth of fowls at close of year.	10.70

Expenses	\$74.31
Income—742.5 doz. eggs, at 15.5 per doz.	115.84
Fowls sold.	9.56

Income	\$125.40
Subtract expenses	74.31

Actual profit.....\$51.09

Which leaves \$1.28 gain on every dollar invested. It also shows a gain on each fowl of 65.5 cts.

Commenced the year 1851, Dec. 1, with 76 fowls, worth 36 cents apiece.	
They consumed 50½ bush. corn, at 81 cts per bush.	\$41.26
Do. 136 lbs. scraps, at 16 mills per lb.	2.11
Interest on the worth of fowls.	1.64
Less worth of fowls at close of year.	8.01

Expenses	\$53.05
Income—874½ doz. eggs, at 16½ cts per doz.	61.65
Fowls sold.	20.35

Income	\$82.00
Subtract expenses	53.05

Profit.....\$28.95

Which leaves \$1.02 gain on every dollar invested. It also shows a gain on each fowl of 38 cts.

My gain this year has been less for the reasons which follow, viz.: I killed off the best of my fowls, one-third part in March; and again I lost by accident perhaps two dozen. So that upon the whole this year shows the business to be as profitable as the year before.

I rejoice that this subject is receiving due weight in New England,—that fowl breeders are counting up the cost, and find in the result a handsome profit. I trust that the fairs this coming year will be ornamented with the native biddies, and that they will be allowed to take the first place in the county shows, as they certainly will at their owner's interest table.

R. MANSFIELD.

West Needham, Dec., 1852.

GRIZZLY BEAR!—All who are desirous of seeing a specimen of the productions of that famous world, California, are advised to go and see the grizzly bear, now on exhibition at 19 Charlestown Street, Boston. The bill states that his actual weight is over 1700 pounds!

REMEDY FOR BOTS IN HORSES.

For many years past I have used a simple remedy for bots, and am almost disposed to call it "an infallible remedy," sure enough. But I can say, with truth, that I have never known it fail if administered at the commencement of the attack. Drench freely with sweet milk and molasses, (sugar or honey will do) well shaken together. Continue it, a bottle full every fifteen or twenty minutes, according to the severity of the attack, until the animal becomes easy; then give a quart bottle full of strong salt and water, followed soon after with a quart bottle of Castor oil.

It is worse than idle to give anything with the view of killing the bots in a horse. The only plan is to convey them off; a sweet drench is the thing; they seize upon it with avidity, and in a little while will fill themselves, increasing at least one-third in size. In salt and water they will lie perfectly dormant for days together, hence the advantage in its preceding the oil. Whenever the bots attack a horse they will always be found at the neck of the throat, where a sweet drench is thrown immediately amongst them the moment it is swallowed by the horse. It is a great mistake to suppose that they are hid in some secret recess where medicine cannot reach them, and quite as great a one to suppose that a sweet drench will not divert their attention from the horse.—*South-eastern Cultivator*.

ADVANTAGES OF WARM WEATHER.

The autumn rains and continued mild weather have already materially aided the farmer in supporting his winter stock. If the weather should continue moderate until the first of January, we think there will be as much fodder on hand at that time as there was on the first of last January. The *Granite Farmer* of the 15th states that "young cattle and sheep have not required any feeding, and a good portion of the sustenance of other stock has been obtained from the fields to the present time."

At a recent agricultural meeting at the State House, at Concord, N. H., Gov. MARTIN, in his excellent opening remarks, stated that the hay crop of that State, in 1848, amounted to 680,000 tons,—which, at the average price of that year, \$10 per ton—would give as the value of the crop \$6,800,000. The present year he estimates there is a deficiency, compared with 1848, of at least one-fourth, 170,000 tons, which at \$15 a ton, will give a loss to the farming interest of the State of \$2,550,000. But this would only be a fact if the weather were the same under the same disparity in the amount of fodder, for a low temperature demands more nutriment, and of course more fodder. Therefore, the mild weather has been constantly decreasing this apparent loss, by a constant saving of hay and grain.

Some idea of the immense saving by the mild weather may be had from the following statement from the *Granite Farmer*. The editor says—

"Being at Hillsborough, the other day, we were

informed by several very intelligent gentlemen that the amount of hay saved daily in that town was at least 40 tons. Last year, it became necessary to feed cattle some 45 days earlier than this season, but to give the advantage against our estimate we will say it was 30 days. This, then, would make a saving over last season in one town of 1200 tons, which at \$15 per ton, would make \$18,000. In this county, there are 31 towns, equal at least to 20 of the size of Hillsboro', and equivalent to it in an agricultural point of view. In the county, then, we have saved \$360,000. Estimating that the ten counties in the State are equal to seven of the size of Hillsboro', and we have saved in the whole State \$2,520,000—a sum nearly equal to the deficiency named by the Governor."

In Jefferson county, N. Y., according to the *N. Y. Farmer*, it is estimated that the saving in that county alone is one hundred tons of hay per day!

For the New England Farmer.

PECULIAR DIFFICULTIES OF NEW ENGLAND FARMING.

Extract from the Address of H. F. French, before the York Co. Agricultural Society, Maine.

WANT OF SYSTEMATIC ATTENTION.

The great and leading difficulty in the way of successful husbandry, in New England, is the want of systematic attention to it, as a business, resulting from a want of confidence that it is sufficiently profitable, a want of accurate knowledge of its principles, and a want of pecuniary means and of other facilities, to pursue it to the best advantage.

Agriculture, thus far, in America, has hardly been conducted as a business requiring the same care, and skill and training with other pursuits of life. The first settlers of our country, indeed, were in no position to pursue it with system. Their first endeavor was to protect themselves from the savages upon the coast,—their next, to clear away with steel and fire the grand old forests, and deposit in the virgin, fruitful soil, the seed, which gave them without much subsequent care, a bounteous return.

Generations passed away. The lands had been cleared, and the crops which could be obtained without skill, and with smallest labor, had been gathered. The best lands of nearly all New England, by this exhausting process, which cleared whole forests for the ashes of its noble trees, or for timber, then, of scarcely more value than its ashes, have thus been passed over.

The first fruits have been gathered. The first stage of progress in the new country has been finished. The earth will no longer yield to man her fruits, without labor—aye, and intelligent labor—labor joined with a knowledge of the principles of husbandry. We, who would now gain our daily bread from the soil, must do it, not only by the sweat of our brow, but by the travail of our brain also.

SKILL, EDUCATION AND CAPITAL NECESSARY.

It would be strange, indeed, if a business, involving the most complicated processes which philosophy and chemistry have revealed, should be the only one that could be successfully conducted without skill, without education, without capital.

Men study years to gain a knowledge by which to weave a fabric which shall cover human nakedness, and shelter their bodies from the heat and cold. Yet "behold the lilies, how they grow"—"even Solomon, in all his glory, was not arrayed like one of these," and yet the art of the husbandman brings him in close contact with the hidden processes of nature, which give the lily and the violet their color and their fragrance. Every bursting seed and every springing blade of grass, every opening bud and every perfumed flower and ripened fruit, is carried step by step to perfection, by principles as eternal as those which govern the courses of the sun and the stars. Every process of vegetation depends, for its results, on laws fixed and immutable as the swelling of the ocean's tide or the motions of the revolving earth; and with these principles and laws, the husbandman who casts his seed into the ground is constantly at work. And shall he alone, of all, who would attain to useful ends by well adapted means—shall *he alone*, in this great laboratory of nature, work blindfolded? It is true that many of her curious combinations of form and color, many of her mysterious workings in all her various departments, are now, and will ever be, beyond the power of human learning to fathom; but that is a poor reason why we should neglect carefully to observe her systematic course, and as far as may be, turn it to practical account.

KNOWLEDGE IS POWER.

Let the farmer realize that to *him*, as to others, *knowledge is power*; that the time has come when the same discipline, and system, and adaptation of means to desired ends, is as necessary to his business as to that of the mechanic, the merchant and the lawyer, and agriculture will at once rise from the position of a mere manual labor, to the dignity of a noble science.

When we undertake to follow out the inquiry, *why* agriculture, in New England, has been, to such an extent, neglected—*why* so little of systematic attention has been bestowed upon it, we shall, perhaps, be surprised to observe how many of the reasons result from the peculiar character of our political institutions, from the almost unbounded liberty of action secured to us as citizens of a republic.

This sentiment of an old poet has been often quoted with approbation:

"For forms of government let fools contest,
That which is best administered is best."

There is certainly but very little poetry in the lines, and I think less of truth than poetry. Indeed, it is interesting to observe, as we trace the differences, even between the laws of the liberal government of England and those of this country, how every principle of our Constitution influences every act and thought even, of our citizens, who are unconscious, perhaps, of the distinctions. Upon this topic I shall have occasion presently to remark further.

THE YANKEE PROGRESSIVE, BUT NOT STABLE.

As a prominent obstacle to systematic husbandry may be mentioned, *the want of stability in the habits of our people*. I say a want of stability in the habits of our people, for instability is certainly not a trait of New England character, but on the contrary steady perseverance with great energy and activity, are the marked characteristics of our

citizens. Yet, looking at the *outside* of our community, there would seem never to have existed so fickle, so changeable, so whimsical a people. This is especially true, of their *occupations*. Look where you will, in city or country, a Yankee is *always progressing*. He is *always seeking a change* for the better. He has no *conservatism*. To-day he is a laborer in the field, holding the plow, or mowing. The next time we meet him, perhaps he is a clerk in a store, or a conductor on a railroad—then perhaps the editor of a western newspaper, and next a member of Congress.

Taking this hasty glance at the American citizen, one would take him for a sort of *wandering Jew*—a person possessed with the very *spirit of unrest*. But this, as I have said, is not, after all, so much an essential element of his character, as the result of his peculiar position in the world. The American is born, where the people of the Celestial Empire imagine *they are*, in the *middle of the world*. But he is fenced in by no Chinese wall, by no State or municipal embargo upon his movements. He is not born the heir of a title, and of vast entailed estates, upon which he must, of course, spend his life, bound to maintain the dignity of a long line of illustrious ancestors, and to help the queen keep her other and more humble subjects in their proper places. He is not fettered by legal enactments, which require him to submit to a seven years' apprenticeship, before he can exercise any mechanical art, nor is he born a serf upon the soil of a lord, doomed to grow up in an ignorance which binds him to a position of dependence and servitude more firmly than chains and fetters. On the contrary, he finds himself, at early manhood, without property, without rank or title, without wealthy friends to aid him, dependent on his own strong arm, and brave heart for his fortune. He is intelligent, educated, and thoroughly imbued with the spirit of liberty and equality, which he has drawn from his mother's breast—has caught from his father's lips—has breathed in the air which has been wafted from Bunker Hill and Lexington and Concord. He is bound to no soil, but to that of his country, and his country is bounded on the east and on the west by the ocean.

He knows what is passing everywhere. The press pours out her stories of the fertility and inexhaustible productiveness of the West, and of the wealth gained almost in a day from the mines of California. Steamers and railways can bear him, sooner than a single crop can be gathered from his native soil, to the teeming valleys of the western rivers, or the gold-bearing shores of the Pacific. He meets daily in the streets friends who report to him tales of suddenly acquired wealth—truth stranger than fiction—stranger than the eastern tales of genii, and the wonderful lamp of Aladdin.

What wonder, that to a young and hopeful heart, thus invited by prospects of wealth more dazzling than fairy tales have pictured, as he sat on his mother's knee in childhood, thus lured by Syrens, singing of easily acquired riches, of a brief period of excitement and danger followed by a life of ease and leisure—what wonder that he becomes dissatisfied with the slow degrees by which his fortune must be patiently wrought out in his native State, that he esteems the cultivation of the soil of New England a hard lot, and desires to try his fortune nearer the setting sun.

He is restrained by no considerations of the advantages of a quiet rural life, for no young man yet, ever had much fear of temptation, or doubted his ability to pass unscathed through its furnaces, though seven times heated.

And so, many of our most enterprising young men forsake their native land—some to re-appear on far distant shores, an honor to the State which gave them birth, leading with New England spirit the grand enterprises of moral and political progress—some to return by and by, successful beyond their hopes even, in their pursuit of foreign gold—some to wander back heart-broken and worn out by disease and want, their only hope to lay their weary bones in New England soil—many, alas! how many to fall by the wayside in the dreary land of strangers, with no friendly voice to cheer them on their last dark journey, or to bear back a son's or brother's farewell to dear friends in their loved and far-off home.

TRIES THE SHOE BUSINESS.

Besides the inducements to emigration so powerful at times as almost to depopulate whole villages in our eastern States, we have another cause of constant change. Many who remain among us, after a short experiment on their farms, abandon the cultivation of the soil as too laborious or unprofitable and adopt some other business.

It is the most common thing in the world, when, for instance, the shoe business takes a sudden start, to see scores of young men, who never before had an awl or last in their hands, leave their farm employment, and congregate together in some little seven-by-nine shop, making, after a week's apprenticeship, each about half a dozen pairs of what are appropriately called *sale shoes*. These young men, crowded together in hot and unventilated apartments, cramped over their benches without active exercise, soon show in their pallid faces their mistake, and when the business fails, as it does, I believe about once in five years, they look about them for means to mount another round of "young ambition's ladder," and select another occupation.

Perhaps a *profession* is next tried, for the world is open to all in this free land. Any citizen of good moral character, that is to say any man who has never been convicted of sheep-stealing, has a right by statute, in most of the New England States, to be admitted to practice as attorney at law, and any man who can buy, borrow or otherwise come by an old horse and a box of pills, may practice medicine, and as to *preaching*, many people among us seem to believe, as Dogberry said of reading and writing, that it "comes by nature" and not by education, and that the less a preacher studies, the more he gets by inspiration.

All these brilliant paths are open to the aspiring youth, and so the profession of the law is crowded with men who have no higher idea of their practice, than as a game of sharps and quibbles and money-getting—who involve everybody who consults them in lawsuits, and who bring reproach and odium upon the very name of their adopted profession. And the quack doctor has even a better, because a less observed field of operation.

If he has wit enough to deal only in brown bread pills, a fair proportion of his patients will of course recover, and if he ventures with ill success into more dangerous experiments, he has only

to sympathize with the surviving friends, walk demurely at the head of the funeral procession, while, like the good man we read of, though in a different sense, "his works do follow him," and the green grass soon covers all traces of his error.

SHAMS AND QUACKERY ENCOURAGED.

One effect of this perfect freedom for every man to do as a business, what seems good in his own eyes, is manifestly to encourage all sorts of shams and quackery, but still this freedom is in accordance with the spirit of our government, and is productive of more good than evil, on the whole. Often, worthy and brilliant exceptions are found to the course which I have so freely denoted, and the importance of keeping down all appearance of an aristocracy, except nature's aristocracy of true genius and genuine nobility of soul, will outweigh, in the end, the evil consequences to which I have referred.

The particular effect of this facility of change upon the agriculture of our States, as has been suggested, is to disturb and prevent anything like a regular and systematic course of husbandry, the absolute necessity for which is so apparent.

For the New England Farmer.

HARVEST HYMN.

RESPECTFULLY INSCRIBED TO THE FARMERS OF THE
"NEW ENGLAND FARMER."

BY THE PEASANT BARD.

AIR—"Dundee."

O Thou, whose wisdom decks the sod,
And loads with fruit the bough!
We thank Thee that the farmer's God
Peculiarly art Thou.

Thine are the seasons as they roll;
Thy years, how dread they seem!
From age to age is Thy control,
Deific and supreme.

When vernal skies and southern airs
Make green the sunny slope,
We turn the glebe with gleaming shares
And cast the seed in hope.

When Autumn pours her solemn light
Upon the fading fields,
Our garners filled to crowning height,
Show what Thy bounty yields.

Do Thou to us Thy grace impart,
Who on that bounty live;
The incense of a grateful heart
Is all that we can give.

Gull, Mass.

OUR JANUARY NUMBER.

We shall send this number to several gentlemen who have never taken the *Farmer*, and ask them to give it an attentive examination, and if approved, to aid in enlarging its circulation. If its present readers believe with us that it is of greatly more value to every farmer than its cost, will each one exert himself to forward us one or more subscribers for the coming year? During the last year we have sent out over six hundred thousand copies of the *New England Farmer*.—Shall that number be doubled in 1853? If you say so it can be done, and its value shall increase with its circulation.

For the New England Farmer.

LYCEUM LECTURES.

MR. EDITOR:—The notice from the Committee of the Board of Agriculture, in relation to this mode of diffusing information, is worthy of careful attention. There is scarcely a town or village in the community, where two hundred persons can be assembled, that has not its course of lectures, on some topic or other, during the winter. In some of these, the topics are designated by the managers; but more generally by the lecturers themselves,—and with little connection or order in the arrangement. Such miscellaneous discourses, with no definite purpose in view, may amuse for the time; but they never can be so instructive, as a well arranged series of lectures, on a particular subject. What topic can be of more universal interest than the culture of the soil? Although all may not engage with their own hands in tilling the ground; still, all do engage in the consumption of its products, and it will be difficult to find any, *high or low, male or female*, who would not receive benefit from attention to these subjects. If the community should manifest a disposition to encourage such lectures, without doubt, competent lecturers would soon appear; for in this, as in most other branches of business, there are always those who are quite as ready to work with their heads as with their hands. As suggested by the Committee, perhaps the season is too far advanced to admit of full courses the coming winter; nevertheless, *three months* would be ample time, for half-a-dozen lectures. And I hesitate not to say, that half-a-dozen lectures, well prepared, on agricultural subjects, would leave a more lasting and useful impression, than any course of Lyceum Lectures that have ever come to my knowledge. I am happy to know that the intelligent citizens of the county of Worcester have taken up this subject in earnest, and already engaged the services of Prof. Mapes, who has the reputation of being in himself a complete library of useful knowledge.

TWO ACRES.

The twenty-sixth meeting of the Germantown (near Philadelphia) Farmers' Club was holden at the house of PHILIP R. FREAS, on the 23d Nov. He is the editor of the *Germantown Telegraph*, a warm and active friend of agriculture, horticulture, &c., and the originator of the club. Though his whole plot of ground comprise less than *two acres and a half*, yet he manages to produce upon it, in perfection, a little of everything. Those who are sighing for more land will do well to read his statement carefully, and inquire whether it would not be wise to cultivate their present acres better, than to add to their number. The reporter at the meeting states in the *Telegraph* that during the present year there was cut two tons and a quarter of prime hay; there were patches of turnips, carrots, parsnips, beets, cabbages, (three kinds) onions, peas, frejole and half a dozen other kinds of beans; salsify, lettuce, okra, corn, (Stowell's Sugar, and Adams'); potatoes, pumpkins, (three varieties,) squashes, tomatoes, egg

plants, asparagus in abundance, celery, (of splendid quality,) together with almost every other kind of vegetable to be found in the catalogue. His fruits consist of melons, six kinds of cherries, five kinds of plums, peaches; twenty-eight varieties of select pears; twelve varieties of apples; red, white and black currants; gooseberries, blackberries, and four varieties of raspberries, grapes, &c. &c. In the garden and mansion yard, there was a very choice collection of flowers, among them many select roses and rare vines. The ornamental trees consist of five varieties of the fir; the Japonica cryptomeria, the Deodar cedar, the Irish yew, and the American arbor vitæ; the European linden, the sugar and silver maples, the English and mountain ash, &c. &c.

In addition to these, there was a number of beautiful Polish fowls—black, white and spangled—and pea fowls, in the barn-yard—a fish pond in the garden—and a large number of choice fancy pigeons at the house. In all this there is an excellent taste displayed. We noticed that the house and offices were lighted with gas, warmed with a heater, and supplied with water from the public works. Baths, hot and cold, have for years been supplied by a reservoir on an elevated back building, holding some fifteen hundred gallons, which has also furnished pure, soft rain water for various parts of the buildings.

In the garden is a small green-house, excavated in the ground, say to the depth of three or four feet, framed up at the sides, raised a couple of feet above ground, and covered with glass. In this enclosure or pit, the usual shelves are arranged to receive the pots; and we are assured by Maj. FREAS, that it is the best possible provision for flowers and almost every description of plants in winter. Roses, particularly, flourish in much greater perfection. During the whole of the last unusually severe winter, but a single delicate night blooming jessamine was at all injured by the frost.

This green-house requires no artificial heat. In the hot-beds, we found cucumbers and cauliflowers up, lettuce heading, and spring radishes full grown. We may truly say, in regard to the "Telegraph Farm," that it is a farm in miniature; but in comfort, convenience, and taste, without any large pretension to mere costly elegance, it is a pattern "plantation," and would, in the full-growing season, afford compensation for a visit from any of our ponderous farmers. In a word, it is in the strict sense of the word, a *home*.

On Tuesday, the 28th of December, was one of the mildest winter days we remember ever to have witnessed. The thermometer stood at 60 in this city, from 1 to 4 o'clock P. M., and the showers, during the day, seemed more like June than December.

HUNT RUSSET.

Take it all in all, for productiveness, for the dessert, kitchen, for the home market and for exportation, and for its beauty of form and coloring, the HUNT RUSSET, we think, excels any other apple in New England, and stands at the head of them all! We say this considerately, after all the opportunities we have had of testing apples, and believe this to be the opinion of some excellent judges of fruit who have had occasion to compare this with many other varieties.

The first governor of Massachusetts, WINTHROP, purchased a tract of land for a plantation, and upon which he intended to reside, on the north-west bank of the river, in the beautiful town of Concord, about eighteen miles, and nearly west, from Boston. The land gradually rises until it reaches a height commanding a pleasant view of the subjacent country, including nearly all of the village, and the broad meadows on the banks of the river, then probably covered with forest trees. Owing to some domestic affliction, as was supposed, the governor never entered upon this land as a resident, and sold it to a gentleman from England, by the name of HUNT, whose descendants in a direct line own and occupy a considerable portion of the land at the present time.

It was this purchaser of the land from Governor

WINTHROP who introduced the apple portrayed above. From inquiries which we have made among the descendants of old Deacon *Simon Hunt*, it appears that the tree originated and occupied a site near the highest point of land in the tract. This land is now owned and occupied by Capt. NATHAN BARKETT, one of the largest and best farmers in that ancient town. We have repeatedly visited his farm, examined his trees and their products, and believe that he entertains the opinion we have expressed of the Hunt Russet. He puts up several hundred barrels of apples this year, and among them a large portion of this favorite. So far as we have been able to trace the history of this apple, we believe that all the trees of this variety now growing in New England sprung from the tree planted on the old Indian Hill in Concord, by Mr. Hunt.

We are inclined to think that the Hunt Russet is identical with the apple described by Cole, Downing and Thomas, as the *English Russet*. The reader will observe that our engraving answers Mr. Downing's description of the *English Russet* which we copy below. He says the "stalk is rather small." In the engraving above the stalk is rather large, but is true, as the whole portrait is, to life.

The fruit, (as Downing says of the *English Rus-*

set) is of medium size, ovate, or sometimes conical, and very regularly formed. Skin yellowish-green, nearly covered with russet, which is thickest near the stalk. Calyx small, closed, and set in an even, round basin, of moderate depth. Stalk rather small, projecting even with the base, and pretty deeply inserted, in a narrow, smooth cavity. Flesh white, tender, with a pleasant, mild, slightly sub-acid flavor.

The tree is a little slow in coming into bearing, but once producing fruit, bears every year; is hardy and of handsome shape. We have seen the apples *two years old*, fair, plump and juicy, kept on a shelf in the cellar with no extra care whatever, and have kept them ourselves a year in good condition. It bears a high price in the market, selling quick at \$5 a barrel in the market last spring, and is rapidly gaining the popular favor.

The above is the opinion we have formed of this fruit from raising, using and comparing it. But we advise no one to adopt our opinions without careful inquiry and investigation for themselves.

For the New England Farmer.

THE SEASON OF 1852 AT WILMINGTON AND VICINITY.

BY SILAS BROWN.

MESSENGERS. EDITORS:—It often happens in the summer, in the time of drought, that an accumulation of clouds at a distance indicate an approaching shower, but on a nearer advance, they split and display at the right and left and disappoint the anxious expectants of a refreshing fall of rain. It is not uncommon, in a dry time, for a succession of such illusive showers to wend their way over the dusty and thirsty earth without any regard to the fasting and prayers of poor sinners below. The town where I formerly lived was visited by two or three dry summers in succession, and the promising appearance of showers followed by the split in the clouds extremely annoyed a neighbor by causing him such scanty crops; he considered his farm to be located right under the "crack in the clouds," as he called it; the whim wrought upon his mind so forcibly that his only remedy was to sell and purchase in a more fortunate place, where clouds were not subject to such rents as to hold no water. In this vicinity we have been highly favored with showers of rain through the summer; instead of the splitting of the clouds and passing by us on either or both sides, nebulous fragments have collected into dense bodies, directly over us and poured down their contents in a profusion of rain.

After an uncommon cold winter and backward spring that destroyed a large proportion of young fruit trees in this neighborhood, the weather changed suddenly the 5th day of May to very warm, which continued till the 9th and gave incipient vegetation a fine start. Fruit trees of various kinds began to blossom the 22d day of May uncommonly full, which had an elevating effect upon the one who was so unfortunate as to be troubled with the depressing effect of the "blues." We had frost on the mornings of the 19th and 20th of May, too early to injure cranberries and

other fruits; June 3d, a great shower; 6th and 12th, frost on low land which was supposed to be the cause of the scarcity of cranberries this fall, the tender shoots that produce the fruit were just starting from the old vine at that critical time; 14th, very warm; 15th, light thunder shower in the morning; 16th and 17th, extreme heat, and shower at 5 P. M., 17th; 18th, soaking rain in the morning; 22d, thunder shower commencing at 9 A. M., which lasted all day and supplied us with a drenching rain, while at 10 miles distance but very little fell, and the spectator, at that distance, could see the clouds congregating and discharging their contents in great profusion in some particular localities, while others continued dry; 25th, slight shower and cooler; 29th, grows dry; 30th, shower, warm and growing time; July 2d, soaking thunder shower, A. M.; 8th to 14th, extreme heat, and top of ground dry; 14th, soaking shower; 15th and 16th, warm; 17th, rainy; 19th to 25th, warm and good hay weather; 26th, drenching rain from N. E.; 27th, to August 1st, good hay weather; 5th, great rain from N. E. and cool; 7th, rain; 9th to 11th, cloudy, but little rain; 12th to 14th, good hay weather; 16th to 18th, cool nights; 19th, warm and dry; 20th, sudden change, wind to N. E., and cloudy and dry to 26th, then a fine shower; 29th, a drenching N. E. storm, which lasted to the end of the month, when the fate of the crops was decided for the season.


The first hard frost was on the morning of 30th September. There has been a good supply of fall feed, a favorable circumstance to those who have not a full supply of fodder, as well as to the producer and consumer of butter. Early potatoes were "small," indurated and glutinous after being boiled, owing to the extreme heat in July; The late ones were much better and afforded us an average crop. Chenangoes and long whites, two of the best old varieties, were the only ones which showed the symptoms of the regular epidemic rot, while different varieties growing from seed derived from Vermont were sound. Cranberries and peaches scarce. Apples abundant; corn and rye an average crop; all kinds of garden roots and vegetables never better; upland hay good; meadow hay very light.

The forests, the ornament of our hills and worrout lands, were not behind our cultivated trees and plants in progressing, for the purposes of lumber and fuel. The fall, thus far, has been rather cool and cloudy, but we have had a plenty of rain and a good supply of water in our wells, a greater antidote to sickness than "rum and tobacco too." There have been more biles and fewer fevers than commonly fall to the lot of mortals by the way of afflictions and mercies, as many of us can testify, the past season; it is possible that the former may be a preventive of the latter. Providence has not stinted us in any of the good things conducive to health and comfort, for which we have reason to elevate our minds in gratitude to that great Being who directs the courses of the clouds, governs the destinies of the crops and shews such favors as the rewards of industry.

Wilmington, Oct., 1851.

S. B.

A gentleman just returned from California, states that Baldwin apples have been selling by the barrel at an average of twelve and a half cents

each. At retail, apples sometimes sell as high as fifty cents each.  You need not postpone setting that apple orchard any longer, Mr. D.

STATE BOARD OF AGRICULTURE.

MET, WEDNESDAY, DEC. 1, 1852.

Col. WILDER presented the Transactions of the Michigan State Agricultural Society, for 1851, from its secretary J. C. HOLMES, Esq., and the Transactions of the N. Y. State Society, for 1851, from B. P. JOHNSON, Esq., its Corresponding Secretary. He also presented packages of seeds from Professor FOWLER, one of which the Professor had received from the Messrs. GIBBS, seedsmen to the Royal Agricultural Society, of England, and the other from Mr. JAMES CUTHBERT, an eminent seedsmen, in Liverpool. The thanks of the Board were voted to these gentlemen, and the Secretary directed to send them, and the N. Y. and Michigan societies, copies of our State Transactions.

Mr. PROCTOR submitted the following resolutions, which were unanimously adopted.

WHEREAS, in the Providence of God, the late Hon. JOHN W. LINCOLN, of Worcester, a member of this Board, has been removed by death, at a period of life when many more years of useful labor might have been hoped from him:—

Resolved, That the industry, integrity, and zeal in the promotion of every commendable enterprise, which marked the character of the deceased, have impressed us with the highest respect for his memory.

Resolved, That we heartily sympathize with the Society he represented, and with the friends of the deceased, in the loss sustained by the death of this worthy man; and in token of respect, direct that this expression of opinion be entered upon our records, and a copy thereof forwarded to the relatives of the deceased, and to the Society he represented at this Board.

Col. WILDER, from the committee to nominate a Secretary, made the following report, which was adopted.

The Committee to whom was referred the nomination of a permanent Secretary of this Board, respectfully report: That the names of several distinguished persons have been presented, and their qualifications have been under consideration of the Committee.

The Committee regret that they have not been able to agree upon a nomination, and they respectfully ask for further time.

In consideration, however, of the fact, that the Annual Abstract of the Returns of the County Societies, and the Report of this Board must soon be put in course of publication, the Committee recommend that the present Secretary, pro tem., Hon. AMASA WALKER, be requested to make up the compilations of the Agricultural Transactions of the Commonwealth, for the year 1852, together with the report of this Board, and to perform such other duties as are incumbent on its Secretary.

Mr. Lawton was requested to report on the Housatonic Society.

The Secretary was directed to make up in small packages, the seeds presented by the Messrs. GIBBS and CUTHBERT, and distribute them to such members of the Board as will make thorough trial of them, and report their experiments in detail to the Board.

Mr. WALKER then reported on the Norfolk Society. He was also directed to take measures to secure a report, from the several societies not heard from, by requesting those who had that duty assigned them to report at the next meeting of the Board.

At the meeting of the Board in July last gentlemen were appointed to visit the several agricultural Exhibitions in the State, and report upon them to the Board. These reports now being in order.

Mr. PROCTOR reported on the Berkshire County Society.

Dr. REED, reported on the Hampshire Society.

Col. J. W. LINCOLN, having deceased, to whom was assigned the Hampshire, Hampden, and Franklin Society, it was voted that Gov. BOUTWELL be requested to make a report upon this Society at the next meeting of the Board, he having been present at the exhibition of that Society.

Mr. WALKER reported on the Worcester West Society, and was requested to report on the Middlesex Society, no report being presented from that county.

Mr. FRENCH, from the committee to nominate three members of the Board, as representatives to the General Board of the United States Agricultural Society, reported the names of

JOHN W. PROCTOR, of Essex,

HENRY W. CUSHMAN, of Franklin, and

SIMON BROWN, of Middlesex Societies,

and they were unanimously elected.

The Board then adjourned to meet at 3 o'clock, P. M.

AFTERNOON SESSION.

The Secretary presented the resignation of Mr. JAMES S. GREENNELL, (Mr. G. having left the State,) from the Franklin County Society, which was accepted.

On motion of Mr. SMITH, the Secretary was directed to notify all the members of the Board of the time of the next adjournment.

Mr. WALKER reported upon the best means of promoting the interests of Agriculture in the State, by public lectures. He thought, as a prominent means, that familiar lectures before the Lyceums in the towns would effect an immediate and practical benefit.

The report was referred to Messrs. WALKER, PROCTOR and HITCHCOCK, to recommend individuals to lecture on agricultural subjects when applied for to the Board.

Dr. REED reported on the importance of establishing *Farmers' Clubs* in each town in the State.

The reports made were full, instructive and in-

teresting, and upon several of them animated discussions arose.

There seems to us to be prevailing in this Board a spirit determined to progress in the right way. Every man takes the laboring oar himself, while the efforts of all are directed to a single point,—the true principles and practice of agricultural improvement. They are not the efforts of a newly-awakened love, or the proselyte's zeal, to glitter like ephemera in the morning sun, and then grow cold and die, but the well settled convictions that the labor of the farmer is often misdirected, so that its true reward is not obtained; that the nature of the soils he cultivates and the operations of the great atmospheric ocean which surrounds him and feeds his crops, are so little understood as to leave him incessantly laboring in doubt and uncertainty as to the modes of culture which he adopts. So far, there has been an earnestness and energy exhibited in the Board which promises important results; and these, whatever they may be, will become common property, as the transactions of the Board and the State will annually be published.

We only give the details of business, leaving the reports, &c., to speak for themselves when distributed.

VEGETATION IN CALIFORNIA.

At a meeting of the *Farmer's Club* at the rooms of the American Institute, in New York, several gentlemen spoke of the wonderful productiveness of the soil and vegetables which spring from it.

According to the information derived from Mr. Shelton, almost every variety of fruit appears to flourish with very little attention in California. The apple, pear, peach, apricot, quince, plum, nectarine, pomegranate, fig, grape, and olive, are now growing there in the greatest perfection. It is the firm conviction of Mr. S. that no country in the world surpasses California in the production of these fruits.

Mr. S. appears to regard the production of onions as the most astonishing. They grow very large and mild there, and are eaten like apples. Mr. Horner raised about 50,000 lbs. on one acre, and they were worth about \$20,000. General Vallyo raised 80,000 lbs. on two acres. Mr. Shelton said that he had seen a field of onions, averaging a pound wt. each. Fifty of them would weigh from two to four pounds apiece.

Potatoes also grow to a very large size, some of them weighing three pounds each—and have to be cut up in order to boil them well—125 pounds had been obtained from five stalks. Mr. Horner had raised from 250 to 300 bushels of potatoes per acre, without manure.

Mr. Dyer said that he had seen radishes in California as large as his arm, and perfectly free from strings or hard fibres. Mr. Shelton stated that these radishes were fit for table in thirty-one days. He represented that lettuce grew there in great variety, and are very fine—some of them attaining the size of a man's hat, and weighing from three to four pounds each. At San Francisco he had

seen the tomato growing all winter. Grapes considered to be far superior to the Catawba; from one to seven pounds on a stem could be raised with very little trouble. He had seen branches weighing upwards of ten pounds each.

Mr. S. stated that there were no less than twenty varieties of clover growing there. The white clover grows three feet high.

In answer to some questions asked relative to procuring ice, Mr. Dye said that their supplies had been principally obtained from Boston, and sold at from 10 to 12 cents per pound. Frozen snow or hail had also been obtained from the mountains packed in gunny bags and blankets. This was sold for the same price as the Boston ice.

Mr. Shelton has brought with him about a thousand specimens of pressed flowers, grasses, trees, &c., also a colored drawing of a great variety of native flowers of great beauty, which are deserving the attention of florists. He has likewise presented to the American Institute about 200 varieties of flower seeds from California.

On land owned and cultivated by Mr. James Williams, an onion grew to the enormous weight of 21 pounds. On this same land a turnip was grown which equalled exactly in size the head of a flour barrel. On land owned and cultivated by Thomas Fallen, a cabbage grew which measured, while growing, 13 feet 6 inches around its body; the weight is not known. The various cereal grains also grow to a height of from 5 to 12 feet; one red wood tree in the valley, known as Fremont's tree, measures over 50 feet in circumference, and is nearly 300 feet high.

Added to these astonishing productions are a beet grown by Mr. Isaac Brannan, at San Jose, weighing 63 pounds; carrots, three feet in length, weighing 40 pounds.

At Stockton, a turnip weighing 100 pounds. In the latter city, at a dinner party for twelve persons, of a single potato, larger than the size of an ordinary hat, all partook, leaving at least the half untouched.

Mr. Dye corroborated the statements of Mr. Shelton, and related some additional interesting particulars. He had noticed in the San Jose valley, which is 78 miles long, and 60 miles across in the widest part, a particular sweet kind of wild clover, which the natives eat with great relish. So thick was the growth of this clover, that when the dry season of the year comes, he has seen thousands of acres covered with the seed of the bur clover to a depth of two inches. On this happy provision of nature, the cattle feed during the dry season. Mr. Shelton showed some specimens of this seed, of which he had collected three bushels on 18 feet square. He had collected sixteen varieties of clover, of which he exhibited specimens. The blossoms of some are very rich. He formed a bouquet of clover-tops alone. He had exhibited some of these specimens in San Francisco, and they had been very favorably noticed by the papers. One variety called the "Mammoth Shelton Clover" was very large. The roots covered a space of 8 feet, and the stalks grow to a height of 10 feet. In Mariposa county there was a large growth of acid clover, of which the natives made drink, resembling our lemonade.


Mr. Dye said that the trees in California were very different from the varieties bearing the same name here.

Rev. Mr. Fitch remarked that the dry season begins in June, and continues to November. It rarely occurred, during that time, that they had any rain; neither were there any dews. In reference to the certainty of the dry season being uninterrupted, Mr. Shelton related an instance in which he had seen hundreds of acres of barley and oats which had been cut down and let lie in swaths on the ground for two months, without injury. Mr. Dye related an instance, near Sacramento city, where three crops of wheat were taken, without any second plowing or sowing;—the first crop produced 50 bushels to the acre, the second 30 to 40 bushels, and the third crop from 20 to 30 bushels. He considered that there was as large a proportion of arable land in California as in the State of New York. Mr. Shelton stated that Horner & Beard had inclosed four leagues (4,400 and odd acres to the league) with an iron fence. He had walked one fenced field of 8 miles.

Mr. Shelton said that he had frequently in his room one dozen heads of cabbage, weighing from 50 to 60 pounds. One, a perfectly solid head, weighed 56 pounds, and was seven feet in circumference. He gave an instance of a spruce tree, 300 feet in height, and 50 feet in circumference.

Of grapes, in California, Mr. Dye said they were as good as those grown in this State. He did not think they were indigenous, except in the mountain districts, where he had met a small, sour description. Rev. Mr. Fitch said that the arable land was about one-third in proportion. It was an erroneous opinion that vegetation could not go on without irrigation. Without irrigation, they could, at all times, have one crop in the year; and where irrigation was introduced, vegetation went on throughout the year. He had seen three crops taken in the year. The oats grew wild, high and thick, on the hills, and in the valleys.

Mr. Shelton exhibited a California potato, over a year out of ground. They grew to a very large size, and were sweet and floury, when boiled. In speaking of vegetables, Rev. Mr. Fitch remarked that the vegetables of California were very superior for eating to those grown here. There, he could make a meal of a turnip, or on potatoes; here he could not eat much of either with impunity. The beet was very fine, growing to an extraordinary size, and was sweet, and uniform in color to the centre, unlike the large beet grown here which is often stringy.

 We notice by an article in the *Canadian Agriculturist*, that the public debt of Canada was \$4,635,999, on the 1st of August last.

By the same paper we observe that the average crop of wheat, per acre, in Upper Canada, is nearly 15 bushels; barley, 21, rye, 12; peas, 15; oats, 26½; buckwheat, 14½; Indian corn, 24; potatoes, 64; turnips, 212. In Lower Canada, where the acre is about one-seventh less than in Upper Canada, the average crop is of wheat, 7 bushels; barley, 15; rye, 8; peas, 7; oats, 15; buckwheat, 10; Indian corn, 18; potatoes, 60; turnips, 95.

This average is much less than that of our hard, rocky New England soil. A portion of the soil in Upper Canada is probably not surpassed in fer-

tility by any in the States. Why, then, are their crops so much less?

CORN SONG.

BY JOHN G. WHITTIER.

Heap high the farmer's wintry board!

Heap high the golden corn!

No richer gift has autumn poured

From out her lavish horn!

Let other lands exulting glean

The apple from the pine,

The orange from its glassy green,

The cluster from the vine.

We better love the rugged gift

Our rugged hills bestow,

To cheer us when the storm shall drift

Our harvest fields with snow.

Through vales of grass and meads of flowers,

Our plows their furrows made,

While on the hills the sun and showers

Of changeful April played.

We dropped the seed o'er hill and plain,

Beneath the sun of May,

And frightened from our sprouting grain

The robber crows away.

All through the long, bright day of June,

Its leaves grow bright and fair,

And waved in hot midsummer's noon,

Its soft and yellow hair.

And now, with Autumn's moonlit eyes,

Its harvest time has come,

We pluck away its frosted leaves,

And bear the treasure home.

There, richer than the fabled gifts

Apollo showered of old,

Fair hands the broken grain shall sift,

And knead its meal of gold.

Let vapid idlers loiter in silk

Around their costly board;

Give us the bowl of samp and milk,

By homespun beauty poured.

Where'er the wild old kitchen hearth

Sends up its smoky curls,

Who will not thank the kindly earth,

And bless our farmer girls!

Then shame on all the proud and vain,

Whose folly laughs to scorn

The blessings of our hardy grain,

Our wealth of golden corn.

Let earth withhold her goodly root,

Let mildew blight the rye,

Give to the worm the orchard's fruit,

The wheat-field to the fly;

But let the good old crop adorn

The hills our fathers trod;

Still let us, for his golden corn,

Send up our thanks to God!

A SIBERIAN WINTER.

A traveller in Siberia, during the winter, is so enveloped in furs that he can scarcely move; and under the thick fur hood, which is fastened to the bear-skin collar and covers the whole face, one can only draw in, as it were by stealth, a little of the external air, which is so keen that it causes a very peculiar and painful feeling in the throat and lungs. The distance from one halting place to another takes about ten hours, during which time the traveller must always continue on horse-back, as the cumbrous dress makes it insupportable to wade

through the snow. The poor horses suffer at least as much as their riders, for besides the general effect of the cold, they are tormented by ice forming in their nostrils and stopping their breathing.—When they intimate this, by a distressed snort and a convulsive shaking of the head, the drivers relieve them by taking out the piece of ice, to save them from being suffocated. When the ice ground is not covered by snow their hoofs often burst from the effects of the cold. The caravan is always surrounded by a thick cloud of vapor; it is not only living bodies which produce this effect, but even the snow smokes. These evaporations are instantly changed into millions of needles of ice, which fill the air, and cause a constant slight noise, resembling the sound of torn satin or thick silk. Even the reindeer seeks the forest to protect himself from the intensity of the cold. In the Tundras, where there is no shelter to be found, the whole herd crowd together as close as possible to gain a little warmth from each other, and may be seen standing in this way quite motionless. Only the dark bird of winter, the raven, still cleaves the icy air with slow and heavy wing, leaving behind him a long line of thin vapor, marking the trace of his solitary flight. The influence of the cold extends even to inanimate nature. The thickest trunks of trees are rent asunder with a loud sound, which, in these deserts, falls on the ear like a signal gun at sea: large masses of rocks are torn from their ancient sites; the ground in the tundras and in the rocky valleys cracks, forming wide yawning fissures, from which the waters, which were beneath the surface, rise, giving off a cloud of vapor, and become immediately changed into ice. The effect of this degree of cold extends even beyond the earth. The beauty of the deep solar star, so often and so justly praised, disappears in the dense atmosphere which the intensity of the cold produces. The stars still glisten in the firmament, but their brilliancy is dimmed. — *Travels in the North.*

For the New England Farmer.

WINTER LECTURES.

BY WILLIAM C. BROWN.

The *New York Tribune* of the 4th inst. has an article on Popular Lectures, in which occurs the following paragraph:—

"We would suggest the propriety of leaning less on scholars and persons of literary habits for the delivery of lectures, and of valuing more highly the inculcations of practical men. If our most intelligent and capable artisans, our best instructed and most successful farmers, our prominent and scientific inventors, could oftener be induced to assume the lecturer's platform, and give the people of their own and the neighboring townships the best results of their studies and experience, the lectures would be more useful, and, ultimately, more popular than they now are."

Here is a suggestion worthy the consideration of all persons interested in the delivery of lectures during the winter months. This custom has become so prevalent, and bids so fair to become universal, that it demands the earnest inquiry of good men, how popular lecturing shall be conducted, so as to secure the best results to the public.

If mechanics and farmers were called upon to deliver lectures, such a call would prove a powerful incitement to the work of preparation, and the

knowledge obtained under such circumstances, *com amore*, would be vastly more valuable than mere school learning; and it would not be long before lecturers, self-taught, intelligent and practical, would multiply on every hand, and still the increase be less than the demand for them. The labor of self-preparation would become infectious; and we should behold the novel and wonderful sight of whole communities cheerfully engaged in studies of a character every way calculated to exalt and dignify the human mind. It would be difficult, if not impossible, to make an estimate of the vast amount of good which would flow from this. Vicious and trashy amusements of every kind would gradually fall into disrepute, as they already have, to some extent, principally through the influence of popular lectures.

There can be no doubt, that there is a great amount of talent in our farmers and mechanics lying dormant. We can conceive of no course better adapted to arouse and develop this talent, than the one suggested. Its development would prove a blessing to the nation, not to be estimated by gold and silver. We should soon find men of genius, intelligence and eloquence springing up all over the country, and their example would prove a powerful stimulus to the younger portion of the community.

Such lecturers as we have described, would not be very likely to choose abstruse and metaphysical, but practical and useful subjects—subjects suited to the tastes, capacities and pursuits of the great body of the people, who, in a government like ours, should always be first considered in all projects of enlightenment and improvement, for in them dwells the sovereign power.

Such lecturers, also, would be less expensive than professional men, and this would not only enable cities and large towns to have more lectures, but would enable small towns, now without them, to establish every winter, a course.

The *Tribune* speaks of one of the results of popular lectures, which we think of the highest importance. We cannot do better than to copy the paragraph:—

"One of the good results of popular lecturing is its tendency to assemble the entire movable population of a village, or rural township, and make them better acquainted with, and more kindly disposed to each other. If lecturing did no other good than this, it would be of great value. Our division into religious sects, tends to alienate and estrange us from each other. The lecture-room must become the Social Exchange—the place where acquaintances are made and friendships cemented; and we would suggest the expediency of a general agreement to assemble from half an hour to an hour prior to the commencement of the lecture, for the purpose of social intercourse and general conversation."

A NEW SOURCE FOR GOOD FRUIT.—Should our present liquor law remain in force it will benefit our farmers in a way of which the originators of that law did not dream. We have thousands of apple trees, of natural fruit, in every town in the State, the crops from which have in former years been made into cider, at a very small profit to the owner. These trees, if the law is sustained, will be grafted over, and pay him a five fold increase on his present receipts. We farmers need just such a rap over the knuckles as this to awaken us to our true interest.—*Middlesex Farmer.*

SOUND MAXIMS IN FARMING.

[The following remarks are from an old pamphlet which accidentally came into the hands of our correspondent "P.," who has kindly sent them for publication. They are well worth remembering.]

The gentleman of fortune, whose farm is his amusement, may wait years for his reward. The common farmer wants his pay down. Plans of improvement have been recommended, practicable indeed to the man of wealth, but wholly uninteresting to the mass of farmers, because beyond their means. They can adopt no system which the *farm itself* will not support. It is a maxim in husbandry, that no mode of management is worth pursuing, that will not give a profit; and that is the best which will afford the greatest profit with the least labor and expense.

Great crops may be obtained at great expense; but if the labor and expense is not remunerated, the crops themselves will be ruinous. The question is, not how a great crop can be obtained? But how can it be obtained in a manner to pay? It is not a valuable improvement in husbandry to increase your productions, if your expense is proportionably increased. The great object is, to increase the productiveness of a farm, so that the expense may bear a less ratio to the increase. By purchasing more land, you impose a burden on yourself difficult to sustain. Many have been impoverished, and not a few have been ruined, by possessing themselves of land for which they could not pay. The intelligent farmer, before he plunges into debt, will not fail to attend to this plain question. Will the income of the intended purchase more than repay the interest, the labor and the taxes? If not, you are better without the land. The possessor of more land than can be improved is a tax upon the owner.—*Rev. Dr. Eaton's Address, Oct., 1822, to the Farmers of Essex.*

SUSCEPTIBILITY OF ANIMALS TO ATMOSPHERIC CHANGES.

In the common sensations of life, we perceive a distinction, according as the exciting cause is agreeable or otherwise, whether it presents itself as pleasure or dislike, bodily strength or weakness, activity or fatigue, warm or cold—by pressure or tension of the atmosphere, &c. By these combinations of sensations, all animals in which they are strongly developed are enabled to anticipate atmospherical changes before the most delicate instruments give any indication of them; and, in a minor degree, the same is traceable in persons of great nervous susceptibility. In the animal world it extends not only to creatures of the land and of the air, but also to those which inhabit the water.

The actiniae throw out their feelers and expand themselves when a continuance of fine weather is to be expected, but withdraw and contract themselves, even in a room, when a change is impending. The mussels, before the approach of a storm, spin several new threads to secure their hold on the rocks; and leeches rise to the surface of the water before rain. Spiders enlarge their webs during fine weather, but spin only short threads, work seldom, or hide themselves in corners, during rain. Many beetles, by their active flight and humming sounds, give tokens of the morrow's

brightness. Before rain, bees remain either in their hives or in the neighborhood of them; and ants convey deep into their hills the pupæ which they expose to the sun in fine weather.

The leeches rise anxiously to the surface of the water before a storm, and hence in Germany they are called weather-fish, and are kept in glasses, where, by their uneasy movements, they denote a change twenty-four hours in advance; and, from the same cause, many fish forsake the sea for the rivers; the groundling is roused into activity, the silurus leaves the deep waters, and the eels become lively. If the lightning strikes the water, the perch sickens and dies; the snake and the slow-worm are restless before a storm; toads leave their concealment before rain; ducks are busily active, and swallows fly lower.

Before a storm breaks forth, many birds, such as the cross-bill and plover, are uneasy, and show themselves less; and while many species of water-fowl hurry for shelter to the shore, the petrel, as if rejoicing in the coming conflict of the elements, dashes forth and defies its power. If the atmosphere be lowering in the morning, pigeons feed rapidly, and return to their cots; and the hare hides itself; but the mole comes to the surface of the ground, and the squirrel seeks its nest, and shuts its entrance. This susceptibility of atmospherical changes, influences, also, materially, the natural economy of some animals; the wild rabbit, for instance, which feeds chiefly in the evening or at night, comes forth at noon-day if the weather portends rain, and loses its natural timidity in its eagerness to procure food.

Before the occurrence of an earthquake, animals become uneasy. In that which took place in Calabria in 1783, it was noticed by Bartel, that the sea-fish were disturbed, and were taken in vast numbers; many birds fluttered about distressed in the air; dogs ran about howling; the horses and oxen trembled, pawing the ground and sporting as if in agony, and the cats slunk about with their hair bristled up.—*Thompson on Animals.*

TRANSACTIONS OF THE WISCONSIN STATE AGRICULTURAL SOCIETY FOR 1851.—This is the first agricultural publication of the young and flourishing State of Wisconsin, and is certainly creditable to the enterprise of her citizens. The volume contains 336 pages, on good paper and type, and is printed handsomely. The society was formed in March, 1851, and here we have in a little more than a year this large and well-filled volume of its operations. The Address by JOHN H. LATHROP, Chancellor of the University of Wisconsin, is a well digested and valuable paper, and, scattered among the people, will have an important influence in awakening them to the importance and connection of their several vocations. The reports from the counties combine a great deal of statistical, geological, and geographical information, which is thus brought together for the benefit of the whole State. The communications upon *breaking up the prairie, manures, flax culture*, and one upon *butter making*, from Mr. DODGE, of Essex, in this State, are admirable papers on the subjects which they discuss.

We, who have made "Indian hills" on the Atlantic shores long before the world beyond the Mississippi was scarcely dreamed of, shall have to be on the alert or our younger brethren will be treading on our heels.

For the New England Farmer.

GATHERING AND PRESERVING WINTER FRUIT.

BY WM. F. BASSETT.

MR. BROWN:—The preservation of fruit depends much upon the location and the season. In this section apples probably ripen nearly or quite two weeks later than on similar soils and exposures in the vicinity of Boston, and in different portions of this country there is even *more* variation caused by the nature of the soil and exposure to sun or wind.

The difference of seasons from one extreme to the other, would, I think, vary the time of ripening from two to three weeks more, thus making five or six weeks difference in the maturity of fruit between a cold season in a late section, and a warm season in a warm section of the State, and I think, there should be nearly an equal variation in the time of gathering; on this point, however, there seems to be some diversity of opinion. Downing says the practice is to let winter fruit remain on the trees as late as possible, or until there is danger from frost. Others say pick it before fully ripened and let it wilt. I should dissent from both these methods as going to extremes; the first, as injuring the keeping, and in some cases the quality of the fruit, and the last as materially deteriorating the quality, without much advantage in the preservation.

So far as my experience goes, both the keeping and eating qualities of the winter apples, in general cultivation here, are much the best when the fruit is picked just late enough to allow it to mellow without any appearance of wilting.

The Rhode Island Greening, if suffered to remain on the trees beyond that time, frequently becomes mealy and cracks open at the season when it is generally fit for use, and the Baldwin is liable to lose its taste much sooner than it otherwise would.

As to the particular time of the year to commence picking, so much depends upon the circumstances named in the first part of this article, that no particular directions can be given, but it must be left to the judgment and experience of the cultivator.

If these opinions are correct, any particular variety will of course keep best in that locality where the season is just long enough to ripen it; and where the climate is too mild, it will succeed best in the shortest summers.

Several years observation, however, have convinced me that after the fruit has once commenced growing, its forwardness is much less affected by temperature than is that of most other kinds of vegetation, and that its time of maturity depends more upon the time of blossoming than upon the warmth of the weather afterwards.

With regard to the cellar in which apples are to be kept, I do not consider myself very well qualified to decide, as my experience on that point has not been sufficiently diversified, but I think it de-

pends much more upon temperature than upon moisture.

Downing says the most favorable soil for a fruit cellar is sand or gravel, with a slope to the north, but I should prefer to have it excavated in what is commonly denominated "hard pan," not however very wet. The poorest cellars for keeping fruit that have come under my observation are warm and wet.

We had on the 1st of March last, Rhode Island Greenings in our cellar in first rate condition, and Baldwins, nearly all of which were as sound as when they were gathered last fall, the cellar in which they are kept being dug in hard pan, and the crevices of the wall filled with mortar; the surface was also more or less frozen nearly half the winter.

In looking over an old volume of the *Cultivator*, I see it stated that one extensive fruit-grower has had good success in keeping apples, by putting them in a large heap a little raised from the bottom of the cellar, and pouring over them water sufficient to wet the whole, two or three times a week; but this I think would be no evidence in favor of carrying them into the cellar damp, or having them dampened by moisture arising in the form of vapor from the bottom of the cellar, as the advantage, if any, from the use of water in this case, I should attribute to the washing and the reduction of temperature consequent on evaporation.

I believe it is the practice of many to allow their apples to stand in barrels above ground as long as the weather will admit.

On this point Cole, in his fruit book, says, where the cellar is cool and airy it is the best course to put them into it immediately after they are picked; with this I should fully agree. W. F. B.

Ashfield, 1852.

REMARKS.—It was our intention to publish this article the first of September, but it was overlooked. We perfectly agree with our correspondent that "much more depends on temperature than on moisture," whether the cellar keeps fruit well or not. A friend of ours had 60 barrels of the most perfect "Hunt Russets" last March, which were placed in a cool cellar as soon as they were gathered. During the day the doors were kept closed, and at night opened until the weather became so cold as to endanger their freezing. They were then barrelled, removed to another cellar, where they remained till April. This cellar, is wet and the temperature so low that water on the bottom froze early in the winter and remained so until spring. He then found the apples, so far as he examined them, in excellent condition. It is, as a general thing, the warmth which occasions rapid decay.

STABLING STOCK.—An exchange says, when farm stock is kept in well littered stalls, and every other judicious means taken to manufacture manure, one head will produce sufficient to keep an acre of ground in the highest state of fertility. We know this from experience.

☞ "Rats is Riz."—The price of ladies kid gloves has gone up from 76 to 80 cents per pair!

For the New England Farmer.

LIME—GUANO—BONE DUST.

MR. EDITOR:—Does the application of lime to the soil supply the phosphates, or bone-forming material? Guano, bone dust and wood ashes are said to contain a great amount of lime in various combinations, but it seems to me they are expensive manures. Ashes I have tried with good effect, but have had no experience with lime. I can procure it for \$1.50 per cask, and ashes for 12½ cts. per bushel. Common stable manure, applied at the rate of 25 ox loads to the acre, and plowed in eight or nine inches deep, proved to be unsuccessful in causing a great yield of corn, but potatoes grew nobly. Why this difference? A long time before the corn ripened, it commenced falling every way, the stalks appearing weak. This, with former years' experiments, has proved that something else is needed beside plentiful manuring and deep plowing. My soil is a moderately light loam, with a subsoil of yellowish loam and gravel, and no traces of clay or sand, except in particular localities. My pastures and tillage land border on pine land of similar formation. My cows, when giving milk in summer, appear weak in their limbs, and fairly disgusted with the Rhode Island Ber, up to their eyes around them, and if they can get into the mow lands after haying, they will feed it down to the roots, even, rather than eat the pasture grass.

L. L. R.

Seekonk, Mass.

REMARKS.—The application of lime alone supplies but one of the materials of which bone is formed. Phosphoric acid is wanted also. Guano contains the phosphates both of ammonia and lime, as well as their carbonates. During the process of vegetation, the phosphates are decomposed.—The phosphoric acid is combined with the fixed alkalies, lime and potash, and in this state is appropriated by those plants that require them. The ammonia, after being separated from the phosphoric acid, is decomposed into its elements, hydrogen and nitrogen, and these elements are used as wanted. It is by the decomposition of ammonia that plants obtain nitrogen chiefly.

L. L. R. has not presented his case with sufficient fulness of detail to enable us to prescribe a remedy, with confidence. We have not all the symptoms. How much corn did he get to the acre? Was the corn sound and the ears well filled? How deep below the surface is the subsoil of "yellow loam and gravel?" How did he cultivate? Did he hill up the corn in the old way, or cultivate with a level surface? When corn grows very rapidly, and begins to spread, drawing the surface soil around the plants with the hoe, and forming a hill, for temporary support, may be resorted to with advantage. We see no reason why such a soil as he describes, in which potatoes "grew nobly," should not yield good corn, unless it be that silex and sulphur are wanting. Potatoes require as much lime, and more potash, than corn.

We will suppose manure is worth to L. L. R. \$1.50 per load.

His 25 loads will cost.....	\$37.50
Let him plow in 16 loads, worth.....	\$24.00
Then take 2 cwt. guano, worth.....	5.00
2 casks Hmo, air slaked.....	3.00
5 cwt. plaster.....	2.00
2 barrels fine sand.....	25.....\$34.25

add two or three barrels good soil that has laid under his hen roost through the winter; mix all thoroughly upon a floor, and put a half pint into each hill. Immediately after the first hoeing let him him take 16 bushels of wood ashes worth \$2.00, and apply upon the surface around the plants. This will make \$36.25, leaving \$1.25 to pay the extra labor of applying the ashes. Ashes or quick lime should not be mixed with guano. They decompose it too rapidly, and the ammonia being very volatile, is mostly lost before it can be appropriated by the plants. Let L. L. R. try this prescription, and report his success. Bone dust is the best "bone-forming material." Mix it with salt, and keep it within reach of your cattle. If this material be wanting, they will use it freely.

For the New England Farmer.

LIME IN AGRICULTURE.

Much has been written upon the use of lime in agriculture, and yet the subject does not seem to be fully understood; some persons need "line upon line" just as some soils need lime upon lime.

Lime is an element in all organic structures. The earthy portion of the bones in the higher classes of animals consists mostly of lime combined with phosphoric acid. The shells of the lower classes consist of lime combined with carbonic acid. All parts of the animal structure are derived from vegetables. Vegetables then must contain a considerable amount of lime, and as lime is not a constituent of the atmosphere, it must be contained in the soil.

According to Johnson's table, 1 bushel of wheat contains 6 and 2-5 ounces of lime, a bushel of barley 6 1-9 ounces, oats 2 3-5, a ton of turnips a little more than 6 lbs., a ton of potatoes 28 lbs., and a ton of clover hay 63 lbs. These quantities vary considerably. This is especially true of wheat. When the soil is plentifully furnished with lime, wheat contains a larger per centage. The skin of the grain is said to be thinner, and the flour whiter and finer and more glutinous.

In soils that consist largely of clay, the benefit of lime is most obvious. It loosens the texture of the soil, and renders it less adhesive. It combines with acids and thus sets at liberty other alkalies that may be contained in it. It is beneficial to soils containing large quantities of vegetable matter, as it appears to render such matters more soluble, and more useful to the living vegetation. Almost every crop that is cultivated is improved by it. It is said to be injurious to flax and hemp, rendering their fibre thinner and more brittle. Compounds formed in the soil by lime are comparatively insoluble. Hence it is from 3 to 6 years before lime applied to the soil is exhausted. The hydrate of lime, or lime slaked with water, acts the most rapidly. Carbonate of lime produces the most permanent effect upon the soil. Light, dry,

sandy soils containing little vegetable matter, are not those which are most benefited by lime; such soils already contain an abundant supply.

There is one error with respect to the use of lime which should by all means be avoided; that is, the mixing of lime with the manure heap, whether in a fermenting or quiescent state. Ammonia abounds in animal manures, combined with phosphoric, carbonic muriatic or other acids. These salts of ammonia are decomposed by lime, which combine with their acids, and expels the ammonia, an element which is of great importance to vegetation. Probably the best methods of applying lime are to spread it upon the soil before planting, and mix it in with the harrow, or to sow it as a top dressing, soon after the coming up of the crop.

Vegetables that contain, in a perfect state a large amount of lime, may attain their full size without an adequate supply, but they will not be perfect plants. Lime is an important ingredient in clover; it is found chiefly in its cuticle or covering membrane. If this grass is grown upon a soil consisting mostly of vegetable matter, and under the stimulus of animal manure, it will lodge, or break down from its own weight, for want of the strength or stiffness which a due proportion of lime would impart to it. Potatoes contain a large percentage of lime, and there can be no doubt that for some years past those that have been raised under circumstances that precluded a sufficient supply of lime, have been more liable to disease than those that could obtain an abundant supply of it.

Potatoes that have grown in low land where the soil consists largely of decayed vegetable matter, or which have been raised by animal manures, have been affected by the rot much more than those which have been raised on sandy soils, or by means of plaster, which is sulphate of lime.

Vegetables that are perfect in their organization, that is, that contain all their normal elements in due proportion, will better resist disease when exposed to its causes, than those that are deficient in any one element—indeed, this remark may be made more general—it may be applied to all living organized beings. The more perfect they are in structure, and the more normal in growth and proportion, the more perfect will be their health, and the greater their power to resist disease. I hope not to be misunderstood. I would by no means intimate that the absence of lime has anything to do with the origin of the potato disease. I do not know that diseased potatoes have been subjected to chemical analysis, to ascertain whether they are deficient in this element, or that those varieties that are most liable to disease have been compared analytically with those that are less so. The solution of these questions merits the attention of the agricultural chemist, if it has not already received it. But I have no doubt that the dry, mealy potato contains more lime than the wet, soggy one—or that those that have grown on dry land with an abundant supply of lime have rotted less than those that have grown under other circumstances.

The analysis of soils, and the analysis of plants, requires to be carried on together.

The cultivator needs to know the composition of the plants which he proposes to cultivate, and the composition of the soil in which he proposes to

cultivate them, that he may judge of the adaptedness of the one to the other, and be able to modify the soil to suit the demands of the plant.

Concord, Mass.

J. R.

For the New England Farmer.

WARTS ON PLUM TREES.

MR. EDITOR:—I have about 150 young plum trees, and last fall I found a few warts on them. I cut them all out and took the precaution to burn them. This last spring and summer I kept watch, and as soon as one appeared I removed and burnt it. In the last of the summer I found most of the trees affected the same way, and some of them were literally covered with small warts.

I wish some of your readers more experienced in the culture of the plum would give me a remedy.

Yours,

W. R. C.

REMARKS.—We can join in the request of our correspondent with as much feeling as he expresses himself, for we are suffering from the same cause, and can find no remedy. A portion of our plum trees are nearly whittled away, and the only benefit derived from the operation, has been the pleasure of whittling with a good sharp knife. The warts insist upon coming, while the tree grows "beautifully less" every day.

BARRY, in his "Fruit Garden," says the cause probably originates in an imperfect circulation of the sap, induced by violent changes of temperature, and recommends cutting out the diseased part as a certain cure, and covering the wound with grafting wax. But that has been resorted to in a great many cases without the slightest benefit. Who will study, watch and experiment, and find out the long sought for remedy? We trust those that are wise on warts will let their light shine on this darkness.

THE WAY THE RUSSIANS TREAT THEIR HORSES.

The Russian coachman seldom uses his whip, and generally only knocks with it upon the foot-board of the sledge, by way of a gentle admonition to his steed, with whom, meanwhile, he keeps up a running colloquy, seldom giving him harder words than "*My brother—my friend—my little white pigeon—my sweetheart.*" "*Come my pretty pigeon, make use of your legs,*" he will say. "*What now! art blind? Come, be brisk! Take care of that stone there. Dost see it? There, that's right! Bravo! hop, hop, hop! Steady boy, steady! What art turning thy head for! Look out boldly before thee! Hurra! Yuhk! Yuhk!*"

I could not help contrasting this with the offensive language we constantly hear in England from carters and boys employed in driving horses. You are continually shocked by the oaths used. They seem to think the horses will not go unless they swear at them, and boys consider it manly to imitate this example, and learn to swear too, and break God's commandments, by taking his holy name in vain. And this while making use of a fine, noble animal he has given for our service and not for abuse. There is much unnecessary cruelty

in the treatment of these dumb creatures, for they are often beaten when doing their best, or from not understanding what their masters want them to do.

The man who is driving a cart will often stop on a cold winter's morning, and fancying a glass of ale will warm his inside, leave his horses standing in the cold till their legs are stiff; then he comes out half intoxicated, feeling he has lost time, and that his horses must make up for it. So before they perceive him, for he has covered their eyes with blinders, he gives them a great lash, and the poor beasts start, and finding their legs stiff with cold, do not at first go as quick as he wishes. And then he gets angry and curses the poor beasts, and lashes them about the head and on the most tender parts, endangering their eyes—which are very prominent—with the end of the lash. The drink and the using this bad language, make him get in a passion—for making use of angry words gives rise to bad feelings—and all have an uncomfortable journey. His horses, whether his own property, or entrusted to him by his master, are the worse for the treatment, and the man becomes brutal and hardened.

Now a merciful man is kind to his beast, and a really good driver knows that creatures that are kindly and steadily treated do better and go more willingly. I rode outside the *Free Trader* one morning. It had three fine horses harnessed to it. The driver mounted his box, and put his long whip into a hole in the box, buttoned his coat, and called *ichick, ichick*. Away the horses set off and went willingly and briskly, till he saw a passenger waiting to get into the coach. "Wo—wo!" he cried out. Immediately they stopped and the man got in. "Right!" The docile creatures pricked up their ears and off they set again. The same thing was repeated many times, and the horses always obeyed directly. The man looked proud of the fine obedient creatures in such good training, and the whip had an idle life of it, for they went far more willingly without it.

HONEY BEES.

The *Albany Cultivator* has an interesting article on honey bees, from the pen of a distinguished professor, from which we quote the following paragraph: "Many—nearly everybody—suppose that the bee culls honey from the nectar of the flowers, and simply carries it to its cell in the hive. This is not correct. The nectar it collects from the flower is a portion of its food or drink; the honey it deposits in its cell is a secretion from its mellific or honey-secreting glands, (analogous to the milk-secreting gland of the cow and other animals.) If they were the mere collectors and transporters of honey from the flowers to the honey-comb, then we would have the comb frequently filled with molasses, and whenever the bees have fed at the molasses hogshend. The honey bag in the bee performs the same functions as the cow's bag or udder, merely receiving the honey from the secreting glands, and retaining it until a proper opportunity presents for its being deposited in its appropriate storehouse, the honey-comb. Another error is, that the bee collects pollen from the flowers accidentally, while it is in search of honey. Quite the contrary is the fact. The bee, while in search of nectar, or honey, as it is improperly called, does

not collect pollen. It goes in search of pollen specially, and also for nectar. When the pollen of the flower is ripe, and fit for the use of the bee, there is no nectar; when there is nectar, there is no pollen fit for its use in the flower. It is generally supposed, also, that the bee collects the wax from which it constructs its comb from some vegetable substance. This is also an error. The wax is a secretion from its body, as the honey is; and it makes its appearance in small scales or flakes, or under the rings of the belly, and is taken thence by other bees, rendered plastic by mixture with the saliva of the bees' mouths, and laid on the walls of the cell with the tongue, very much in the way a plasterer uses a trowel."

For the New England Farmer.

RAISING AND SELLING MILK.

MR. EDITOR:—I notice an article in your paper of the 9th inst., containing some very pertinent inquiries and just reflections upon the subject of "Raising and Selling Milk." I am but a novice in the practical business of farming, but believing in the doctrine of "progression," I am anxious to learn whatever may truly advance the interest and happiness of the farmer. Experience is said to be a dear school, and therefore he is wisest who learns from the experience of others. But it often appears to me that farmers, above all other men, pay most largely for their schooling, while many are but little disposed to profit from the one source or the other.

I live in a town which is said by some to produce more milk for Boston market than any other town in the State. Be that as it may, most of the farmers here raise milk to sell. When I commenced farming I determined to know for myself the relative advantage of selling milk and making butter. Having made a sufficient number of experiments under varying circumstances, I found the mean quantity of milk required for a pound of butter to be nine quarts. This quantity, at the price paid here in summer, would amount to eighteen cents. I determined to make butter rather than sell my milk. The inquiry made by your correspondent is, Does it pay to raise milk to sell at 2 or 2 1-8 cents per quart? From what little experience I have had, I should answer an emphatic no! And I will give a reason or two for the "faith that is in me."

First of all, keeping a stock of cows and selling their milk, carries a large amount of yearly product clearly from the farm, without any return in fertilizing compensation to the land, unless purchased with the proceeds of the milk from foreign sources. This no man would think of doing who raises milk to sell at 2 or 2 1-8 cents per quart. The result therefore of selling milk from a farm at such prices, is the impoverishment of the farm as surely as would be the selling of the greater portion of its yearly product of hay. Another fact in connexion with the selling of milk from a farm, which largely contributes to this impoverishing result, is, that farmers who sell their milk raise little, if any pork, and are therefore deprived of the valuable labor of swine in the manufacture of manure.

If a farmer cannot afford to purchase manure whereby to compensate his land for the product of milk taken from it, then it is clearly a losing busi-

ness, because "always taking from the meal chest, and never putting in, will sooner or later come to the bottom." But so long as farmers prefer present *apparent* gain to future *positive* profit, so long will they continue to sell their milk at 2 cents per quart. Your correspondent thinks the farmers alone to blame for this low price for milk. True, he is, just as all laborers and producers are, to blame for the oppression which capital inflicts upon them. Capital has got its heel upon the neck of labor, and so long as men's moral and intellectual energies are cramped and undeveloped by the present over taxation of his physical powers, so long will the laborer bear his burden of oppression.

You, Mr. Editor, nor your correspondent, are willing to say that those engaged in the commerce of milk get more than their share of its value, but you both think the farmer gets too little. In this, few farmers I think will disagree with you. But when you, Mr. Editor, intimate that from the fact that mechanics and other laborers have to pay high prices for farm products, that farmers "get prices high enough as an average on all they sell," I think you put forth a specious argument for the continuance of the low price of milk. For however high "farm products" may be to the consumer, it is notorious amongst farmers, at any rate, that for other products as well as milk, the farmer is but poorly paid for the amount of labor and capital expended. Farmers do not get the high prices which the consumer pays; far, very far from it. The truth is, there are too many *stand between*—by far too many distributors of the products of labor—Labor is burdened with the maintenance of altogether too many *non-producers*. And until farmers and other laborers have moral and intellectual energy sufficient to lead them to associate together for their mutual defence against the oppression of capital and the maintenance of drones, they must continue to give about three-fifths of their earnings for the support and gratification of others. Let no one suppose I under-value services of the needed distributor of the products of labor—but when three men have to be paid and maintained for services which could as well or better be performed by one, it is time to look about and see where the "pay" is coming from. But there is no good reason why the farmers of a town who raise milk to sell, should not associate for the purpose of selling their milk to the consumers, and also for the purpose of selling any other product which may be rendered into a steady business.

I like the suggestion of your correspondent, and think it is highly expedient that farmers should hold a "CONVENTION," and if they cannot do without a "platform," make one, only let them be sure to make it large enough that all may stand upon it without any "bolting."

Yours truly, T. A. S.
Westboro', Oct., 1852.

REMARKS.—We see no reason, from our correspondent's remarks, to change our expression at all. If his products pass through three or four hands before they come to the consumer, he must combine with his neighbors, and supply the consumer himself. There can be little doubt that the "huckstering" business is carried too far, and that

many of the productions of the farm pass through too many hands before they reach the consumer.

We reside in a strictly agricultural town, and have seldom found it difficult there to get 25 cents a pound for butter, (and it is bringing now 27) 15 to 25 cents a dozen for eggs, 9 to 12 for salt pork, 50 to 80 cents a bushel for potatoes, 80 to 100 cents a bushel for corn, and other products at equally high rates. We sold last year of our own raising between one and two tons of fresh pork for about 8 cents a pound, and were recently told that in a neighboring agricultural town good salted pork was selling quick at 17 cents a pound. These prices amply sustain our remarks, as quoted by our correspondent.

The evil to the farmer does not lie in low prices, but in a want of combination and system, such as the merchant and manufacturer put in operation the moment they find their interest demands it.

HOUSE PLANTS IN WINTER.

"What is the reason that my plants do not grow so well as Mrs. Jones's. I am sure I take a great deal more pains with them, and water and nurse, and air them, but all will not do; they are weak, slender, sickly, and some of my best plants have died—while Mrs Jones seems to take very little care of hers, and yet they grow and bloom beautifully!"

This appeal to us for aid and advice, which has just been made, is not the first complaint of this kind of ill success. The truth is, some plants are actually nursed to death. Care and attention bestowed on plants, *which they do not need*, are worse than no care at all. It is knowing *just what to do*, and doing that, and no more, that gives some persons their success. Or, as a late writer remarked, there are two great points to be attended to—

1. Not to *let* your plants suffer by neglect; and
2. Not to *make* them suffer by interference.

We would class the requisites for good treatment as follows:—

1. Plenty of light.
2. A due supply of water.
3. Proper temperature.

Fresh air, cleanliness, and good soil, are obviously of importance, but are less likely to be neglected than the three first named wants, and we shall therefore add a few additional remarks under these heads:

1. *Light*.—Plants cannot by any possibility have too much of this. The stand should therefore face the window, and be placed as near to it as practicable; and the window should be broad, as little obstructed in its light by outside trees as the nature of the case will admit. But rapidly growing plants require most light; hence, such should be placed more directly in front of the window.

2. *Water*.—This must be given according to circumstances. A plant in nearly a dormant state, needs very little—those in a rapidly growing condition require considerable. Too much water will make the latter grow slender, but they will bear a greater supply if in a strong light. It must be remembered as a standing rule, that dormant plants may remain comparatively in the dark, and with little water; and growing ones should have a

good supply of water and a full supply of light.—But it must not be forgotten that green-house plants generally are nearly dormant during winter, and the soil must therefore be kept but moderately moist, as the plants in this condition do not pump any moisture from the soil, and little escapes directly by evaporation. Drainage, by filling one-fifth of each pot with charcoal, is of importance.

Temperature.—Many house plants are destroyed by too much heat, which increases the dryness, and both these causes together are more than they can endure. A cool room, never as low as freezing, is best. From 50 to 55 degrees is much better than 65 or 70, the ordinary temperature of living rooms.

Syringing the foliage with tepid water, to wash off whatever dust accumulates, is of use; and the admission of fresh air, when there is no danger of chilling or freezing the foliage, should not be neglected.—*Albany Cultivator.*

PLOWING ORCHARDS.

In an article on old apple trees, recently, we spoke of the effect of plowing upon the roots, and suggested that great caution should be observed in cultivating among them. The remarks below are from two or three speakers who took part in a discussion at one of the agricultural meetings held by the members of the legislature in Maine, last winter. We suppose the gentlemen were not speaking of orchards just planted, but of old orchards, or those that are in bearing. These remarks will have a tendency to make us all more careful with the plow among our trees.

"Mr. Foster said, he was satisfied that it was not a good plan to plow and cultivate the land in orchards. Plowing wounded the trees, broke off the roots, and produced disease. It was best to select a spot for the orchard, which the farmer would never want to plow. He recollected a case which confirmed his theory. He was called upon, by a farmer, to graft his orchard. The orchard where the grafting was to be done had been prepared with great care, plowed often, and the trees pruned closely. By its side, stood another orchard in a pasture. When he went into the orchard for the purpose of grafting, the trees he found were much diseased. He thought he would examine the trees in the pasture, as they were planted at the same time, in like soil, and the only difference in their management was that while the trees in the enclosed orchard had been pruned closely and ploughed among, those in the pasture had been left to grow pretty much as they would. The trees in the pasture he found sound,—the wood white clear through. He was satisfied that ploughing, breaking the roots as it must in every direction, was bad treatment for the orchard.

Mr. Boothbay, of Saco, would subscribe to the doctrine that ploughing in an orchard was detrimental to the trees. It was his experience. He had several trees in a pasture, situated near a spring where the stock went to water. In the summer, the stock would go to the spring for water, and, having slacked their thirst, would lie down under the trees, and stamp around them, keeping the ground porous. The trees had flour-

ished finely and bore well, while he could not say so much for his trees situated elsewhere.

The Chairman, Col. Smart, of Troy, said that he had been as it were, reared in an orchard; he concurred with his friend Foster, somewhat, in his ideas respecting ploughing an orchard. A brother of his had taken three crops of wheat from his orchard, and he was aware that the trees had suffered materially in consequence, and that injudicious tilling had caused it to decline. Several years ago, his son took a considerable quantity of muck from a low spot where flags grew, and carted it into the orchard, and spread it among the trees, and he thought the process increased the yield of the trees very much.

For the New England Farmer.

APPLES.

MR. EDITOR:—At the last exhibition of the Middlesex Agricultural Society in Concord, we noticed among the superb display of fruits on that occasion, a number of varieties of Apples, (which were new to us) of very great size and beauty; but as the "orders of the day," would not permit us to judge of their quality except by the outward appearance, which you well know is not always a sufficient datum upon which to pronounce a righteous judgment; and as we saw no one present of whom we could obtain the desired information, we were obliged to leave without having our curiosity fully gratified. Among these, were the Golden-Sweet, and Harrison Apple, presented by Mr. J. Wetherbee, of Marlborough, and the New-York Baldwin, of which we do not recollect the contributor. We also noticed some new varieties (Seedlings, we believe) in the extensive collection of Mr. Eustis, of South Reading. Now we are aware, that "all is not gold that glistens," and that "a new broom usually sweeps clean," and we know equally well that some kinds of fruit which make a very brilliant display in a horticultural exhibition, are totally worthless, in fact, a complete nuisance, to everybody except the amateur cultivator. We do not know, however, that this is the case with those varieties we have mentioned; and if Mr. Wetherbee, or any other reader of the *Farmer* who has cultivated these varieties, will give us through your columns, an account of them, describing the fruit, its size, quality, the bearing habits and growth of the trees, we should be much obliged to him.

Of the Northern Spy, we do not recollect of seeing a single specimen. As this fruit is getting to be extensively spread, and as its success in New England is at least problematical, (it being a New York apple), we should like to know if any one has made a sufficient trial of it, to determine its value as a variety for extensive orchard culture. Its character should be better known.

By the way, we conceive that the columns of an Agricultural paper could not be better occupied than by devoting a reasonable space to the dissemination of such a knowledge of the different varieties of fruit, their defects, as well as their desirable qualities, as might serve as a guide to the practical cultivator. It is only after a thorough and extended trial, of any fruit, that its good or bad qualities, its productiveness or unproductiveness can be determined; and if those who possess the requisite knowledge would impart the fruits

of their experience to others, they would confer a great benefit upon the fruit-growing community, and save many a tyro in this branch of business, from the disappointment and vexation which the failure of well recommended fruit seldom fails to occasion.

There are four qualifications which we consider essential in a first rate fruit.

1st, it should be of *good size*.

2nd, of *good quality*.

3d, it should be *handsome*.

4th, it should have *firmness and consistency* enough in its texture to bear transportation without material injury from bruising.

The Baldwin and Hubbardston Nonsuch, are good examples of this latter quality. The tree should be a *free and healthy grower*, and, withal, an abundant bearer. A deficiency in *any one* of these qualifications, is a material drawback upon its value as a market fruit. With regard to *color*, we think (as a general rule), a *red or striped* fruit most desirable for the market, as being more showy and per consequence, like many other commodities, more saleable. We do not think a *very large* apple, is a desideratum.

Perhaps the Hubbardston Nonsuch is the *ne plus ultra*, in this respect. Large apples are more liable to fall from the tree before they are fully matured, and it is seldom the case that such varieties produce well. As there are but very few varieties, especially of winter apples, that are No. 1. in all the particulars we have specified, we think our country agricultural societies would do well to offer liberal premiums, with special reference to the discovery and propagation of new and desirable seedling varieties of fruit, particularly of winter apples. The time may come when our most valued varieties will fail us.

Yours respectfully, W. D. TUTTLE.

Action, Mass.

WHAT GUANO IS MADE OF.—As guano is getting to be one of the vexed questions of the day, the following analysis of outer Lobos Guano, recently made in London, has an interest, particularly to the agriculturist:

Salt of Ammonia.....	7½ parts.
Animal organic matter.....	8½ do.
Sulphate of Muriate of Potash and Soda.....	12½ do.
Phosphate of Lime and Magnesia.....	52 do.
Sand.....	18 do.
Water moisture.....	11½ do.

Liebig says that one pound of guano imported into a country, is equal in value to eight pounds of wheat, or twelve and a half cents. It was stated a day or two since, that ten tons of guano at \$30 per ton, was worth to the farmer \$600 net profit.

For the New England Farmer.

GREAT YIELD.

Mr. B. W. KINGSBURY, of this place, raised the past season, from three seeds of the citron melon, *seven hundred and ninety-four pounds* of melons; the largest weighing twenty-three pounds, and quite a number of them weighing twenty each. These vines came up accidentally and received no extra manure or care. J. H. & Son.

Newton Centre, Nov. 24th, 1852.

REMARKS.—That beats California taters, pumpkins and perhaps melons. Pro-di-gious!

UNITED STATES AGRICULTURAL SOCIETY.

It is an old saying, not without foundation in truth, that *Providence helps those who help themselves*. Ever since the foundation of this government, the leading minds in the country, engaged in other pursuits than those of agriculture, have appreciated the importance of systematic efforts for its advancement, and especially of aid in *some form* by Congress. Nearly every President, including Washington, has made recommendations to this effect in his messages, but as yet nothing worth naming has been effected.

The reason is not difficult to find, and it is this; that the farmer himself has taken no interest in the matter, and on the theory of our text, has deserved no help from the "powers that be."

At last, however, we have the beginning of better things. A National Agricultural Convention, called, at the suggestion of the Massachusetts Board of Agriculture, was held in Washington last June, and *The United States Agricultural Society* was formally established. Hon. MARSHALL P. WILDER, the man of all the world who best deserved the honor, was elected President. A Vice President was chosen for each State and territory, and an executive committee of five members, a corresponding secretary, recording secretary, and treasurer for the society.

A *Board of Agriculture* is provided for by the Constitution of the Society, the duties of which are thus prescribed.

BOARD OF AGRICULTURE.

"It shall be the duty of this Board to watch the interests of Agriculture as they are or may be affected by the legislation of the country; to make such reports, memorials and recommendations, as may advance the cause of agriculture, promote and diffuse agricultural knowledge, to examine, and when necessary, report upon the practicability of establishing agricultural schools, colleges and model farms, to set forth the advantages of agricultural and geographical surveys, and to show the importance of science to agriculture; to represent, through their report, the relation of American Agriculture, to that of foreign countries, and endeavor to obtain information from such countries; to point out the advantages of introducing any new staples, seeds and plants, and obtain, as far as practicable, annual statistical returns of the condition of agriculture throughout the different States, all which information shall be published by the Society and form part of its transactions."

Some discussion was had as to the mode in which it was expedient that government aid should be rendered to the cause. Objections were made to the establishment of a Department or Bureau of Agriculture, by Government, on the ground that it was not constitutional, and that it would, if established, be liable to the political changeableness of all political things, and become a party affair. Without quarrelling, prematurely, howev-

er, about questions of this kind, it was sufficiently obvious to all, that much "material aid" might be rendered to the Society, incidentally, if not directly, by the distribution of valuable seeds and plants, and especially by the diffusion of knowledge by printing and circulating agricultural statistics and general information.

And this, after all, is the main point—the *diffusion of knowledge among the masses of the people*. There has been for centuries, enough of agricultural knowledge extant, if generally appreciated and practiced, to change this wilderness of a world into almost a paradise, but that knowledge has been confined to a few—formerly, before the art of printing, necessarily to a very few, and always to this day, to a small portion of the community. The reading, thoughtful farmer may obtain this knowledge, and he has obtained it to a great extent, and its effect has been manifest in his success in cultivating his land.

But now, at this time, the majority of the farmers, even of New England, have not access to the knowledge which is printed and published.—Many of them take no agricultural paper, and have a jealousy of all teachings except the *traditions of the elders*!

Now the first object in view, is to overcome prejudice against scientific farming, to make every farmer understand that he has much to learn, and to put into his hands the results of the experience of other men, and to draw out of him, for the benefit of the world, the observations of his *own* experience. This object can in no way be more readily accomplished, than through societies of this kind, and we regard a National Society as indispensable to bind together as a *Union*, the agricultural talent and interest of the whole.

Into such an association, where all parts of the country are interested, all the results of a thousand experiments may be brought together—through it, all the theories of a thousand speculative minds may be tested, and their fallacies exposed, and their benefits made manifest.

The great desideratum is to bring the minds of men in contact, to compare theories and results, to publish to the country whatever valuable conclusions may be attained.

The Constitution of this Society provides for the admission of *Life Members* on payment of twenty-five dollars, and of general members on payment annually of two dollars.

Each member will receive, free of cost, a copy of the journals of proceedings, and of all other matter published by the society.

We trust the farmers of the country will enter into this matter with spirit. It is true that calls are made, constantly, for aid to County and State societies, but no interested member of any society will give this as an excuse for not joining the United States Society, for every such man will feel

that he has already received the worth of his money from such sources, and will look upon such payments as the best investment of his funds that can be made.

The *charity that begins at home*, has the approbation of those even whose charity goes never beyond home, and the most penurious man is willing to pay his money for what is of more than its value.

We advocate no charity in this instance, but we invite all good citizens to join in a good cause for their own advantage, and for the advantage of their fellow-men, believing that all who, upon either consideration, are induced to render their aid, will find ample reason to be satisfied with the results.

Measures, we are informed, will soon be taken to procure members throughout New England, and we trust New England men will show a New England spirit in the enterprise.

INVENTORY OF NEW HAMPSHIRE.

We copy that portion of it which relates to stock kept in Rockingham County, from the *Exeter News Letter* of Dec. 6, 1852.

The number of horses returned for the present year was 4,889. Of these, Deerfield had the largest number, 368; Derry had 278; Portsmouth had 240; Exeter, the fourth in the list, had 228; Londonderry had 220; and Northwood 212. No other town had over two hundred. Gosport had none and New Castle only 9.

The number of cows, oxen, and other neat stock kept in the county at the time of taking the inventory, was 26,934. Of these Deerfield had the largest number, 1974; next comes Derry, 1300; Candia had 1246; Londonderry, 1200; Nottingham, 1153; Northwood, 1079, no other town had over one thousand. Exeter had 777, Epping 972, Portsmouth 682, Kensington 800, Hampton 842, Hamptonfalls 834. No other town had less than three hundred, except Gosport, which had none, and New Castle 51.

The whole number of sheep in the county was 13,820. Deerfield had 1345; next comes Epping, 954; then Nottingham, 897; Brentwood, 672; Raymond, 670; Stratham, 695; Northwood, 634; Chester, 619. No other town had over five hundred. Exeter had 390.

A BEAUTIFUL ART.—Our attention was attracted, a day or two since, by the beautiful appearance of a carved picture frame in the window of Messrs. W. & S. B. Ives' Bookstore. Upon closer inspection and upon inquiry, we learned that what had seemed to us to be carved work, was in reality a very beautiful imitation, manufactured of scraps of leather, and skilfully colored and varnished. The work was done, as we are informed, by a lady of Lynn, Mrs. Moody, who is willing to give instruction in this really beautiful art, if a class can be formed. It is a very pleasant and easy kind of labor, and is peculiarly well adapted for females.—*Salem Observer*.

☞ An exchange calls getting out of bed on the 31st of August, "the last rose of summer."

For the New England Farmer.

BULL—EARL OF SEAHAM.

MR. EDITOR:—I observe in your May number a portrait of the bull EARL OF SEAHAM that I selected in England, and jointly, with Col. SHERWOOD, imported. This portrait was taken and engraved for the *International Magazine*, but was by its proprietors condemned, and I had hoped not to see it in print. In two important points it does the bull great injustice; it gives him the coat of a hog, and feet too small to walk with, even to stand upon.

I send you another likeness of the bull, that at least represents a coat of hair, (giving assurance of good touch) and feet upon which he can stand and with which he can walk.

Seaham was shown at the New York State Agricultural Show held at Albany, in 1850, and won the first prize for two year old Short horn Durham bulls, beating Mr. George Vail's bulls Fortune (by his Bates bull imported Wellington) and Eclipse by his prize bull Meteor.

In Oct., 1850, he was shown at the fair of the American Institute in the city of New York and won the first prize for Short horn bulls two years old and upwards.

In September, 1851, Seaham then three years old, won the first prize for Short horn bulls three years old and over, at the Show of the New York State Agricultural Society at Rochester, beating Mr. L. G. Morris' prize bull Lamartine, and a number of others.

Earl of Seaham, is of a distinguished family, known as the PRINCESS TRIBE. For style, quality and milk, it is, in my opinion, the best in England or America.

My cow, imported, Princess I., last year at four years old, gave on dry feed with meal for two months, twenty-one to twenty-three quarts of rich milk, and in May and June on grass twenty-three to twenty-six quarts a day; and this spring on hay, turnips and four quarts of meal has given twenty-four quarts per day and made 13 pounds and 9 ounces of butter in one week. My heifer imported Princess IV., this spring on hay, turnips and 4 quarts of meal, at her first calving has given twenty-two quarts of rich milk. Col. Sherwood's cow imported Red Rose, at four year's old, with her second calf, made 60 pounds and 4 ounces of butter in 30 days ending the 15th of June, 1851, and 47 pounds and 11 ounces in August, amid all the droughts of that month. During five months she averaged as much in milk and butter as during these sixty days.

All the cows of this Princess tribe, now imported that have calved, are good milkers, and I know that Mr. Stephenson, their breeder, has not a moderate milker in his herd; they are all good milkers both in quantity and quality.

I add the pedigree of Seaham, that his long-continued high breeding may be seen:

EARL OF SEAHAM, (10,161.) Roan; calved April 21, 1848; bred by John Stephenson, Esq., Wolviston, county of Durham, England; imported 1850, by A. Stevens and J. M. Sherwood; got by Earl of Antrim, (10,174.) dam, Primrose, by Napier, (6238.) grandam, Rose Ann, by Belleophon, (3119.) great grandam, Rosette, by Belvedere, (1706.) gr. gr. grandam, Red Rose, by Waterloo, (2816.) gr. gr. grandam, Moss Rose, by Baron, (58.) gr. gr. gr. grandam, Angelina, (bred by Sir Henry Vane Tempest,) by Phenomenon, (491.) gr. gr. gr. gr. grandam, Anna Boleyn, by Favorite, (22.) gr. gr. gr. gr. gr. grandam, Princess, (bred by Robert Colling,) by Favorite, (252.) gr. gr. gr. gr. gr. grandam, Brighteyes, by Favorite, (352.) gr. gr. gr. gr. gr. gr. gr.

grandam, Brighteyes, (bred by Alexander Hall,) by Hubback, (319.) gr. gr. gr. gr. gr. gr. gr. grandam, Brighteyes, by Snowdon's Bull, (612.) gr. gr. gr. gr. gr. gr. gr. grandam, Beauty, (bred by Thomas Hall,) by Masterman's Bull, (422.) gr. gr. gr. gr. gr. gr. gr. gr. grandam, Duchess of Atholl, by Harrison's Bull, (292.) gr. gr. gr. gr. gr. gr. gr. gr. grandam, Tripes, (bred by C. Pickering,) by the Studley Bull, (626.) gr. gr. gr. gr. gr. gr. gr. gr. grandam, bred by Mr. Stephenson, of Ketton, in 1739. (See 9th vol. Herd Book, pages 65 and 526.)

This tribe had been in possession of Mr. Stephenson, of Ketton, and his father, of Acklam, as far back as 1684, and prior to that in the possession of the Aislabies of Aislaby, and Studley, as early as 1600. The celebrated bull Hubback was of this family, his grandam being bred by Mr. Stephenson, of Ketton, and by him sold to Mr. Hunter, the breeder of Hubback. For seventy years prior to 1765, in which year Mr. Hunter bought Hubback's grandam, Mr. Stephenson, his father and grandfather, had kept no other cattle than those of this tribe.

You mention the deficient milking qualities of Short horns in general. This is true as to some. Yet it has been the result of such treatment as must ever ruin the milking capacity.

Taken as a race, no breed ever equalled the Short horns as milkers in point of quantity, and none ever excelled them in quality, when giving as much in quantity. Milking has always been their characteristic. Many breeders not desiring the milk, have bred their herds for beef only, and have lost this quality, yet that was not the fault of the race. Every prize won for years at the New York Agricultural Society Shows, has been carried off by Short horn cows, never by a Devon or Ayrshire.

I differ with you as to Devons and Ayrshire. All the persons within my knowledge, save one, who have tried the Ayrshires in this country, have abandoned them. Mr. Prentice, of Albany, has bred them for years, and at present does so, solely. He claims for them great excellence in this respect. On the other hand Mr. Colt, of Patterson, who imports from the best sources in Scotland, has abandoned them as indifferent, and he has for years pursued the production of milk with great skill and care. I might add other names to the list of those who have tried and rejected the Ayrshires as worthless. Experience has shown that in America they are miserable feeders (they are so in Scotland) and indifferent milkers. The climate is too hot for them. I am told that Mr. Cushing, of your State, near Boston, has abandoned them, and he imported at large expense and tried them fully and fairly.

I am a breeder of Devons, and an admirer of them, deeming them one of the best races of cattle in the world. I have been an attentive observer of them for twenty-two years, and have seen them in thousands both in England and America.

As a race, they have never had a milking character, and the most of Devons are now worthless or only moderate as milkers. The great mass of those now and formerly to be seen in this country were and are moderate animals in many respects. They had and have thin narrow backs and chins; flat ribs and bad crops, sinking behind the shoulder; short stiff hair, thin on their hides, and no undercoat, readily admitting the rain; hides thick and hard and as a consequence they are bad handlers; bad briskets, narrow and receding, with leathery chops and heavily dewlapped necks; thin plates, with bagging paunchy bellies. If to this

be added, that the mass of Devon cows in this country are and have ever been moderate milkers and late in maturing. I think there can hardly be any thing worse. It is true, that many of these animals, bad in point of form, were good in point of milk. But animals to be good, should be good in everything; they should milk well, they should feed well and should make level and well pointed carcasses of beef.

Now there are Devons that are all that good cattle should be, are milkers, feeders and have abundant substance, just form, light ofal, long mossy or furry hair, with thick undercoat, mellow hides, and admirable touch, and of early maturity; although there are such, they are far from numerous.

In 1850 I imported a number of Devons, selecting them from the best herds in Devonshire, England. Among the number is the bull now owned by the Messrs. HURLBUT, of Winchester, Conn. I invite the breeders and admirers of Devon to see him. They will find him what a Devon should be; and he came from a dam, who is as remarkable for milking power, as she and her son are for form, style and substance. They are the reverse of the picture I have drawn above of bad ones. I imported several heifers and two bulls, besides Messrs. Hurlbut's, and I selected them as meeting my requisitions, and in them I can show early maturity, broad backs and chines, round ribs and full crops, clean throats, and broad deep briskets, and straight bellies with level carcasses. My three year old heifers have milked, with first calves, 18 and 19 quarts of milk, and a two year old, 16 quarts. These animals came from the best sources in Devonshire, viz., the Messrs. Quartleys, Davy & Merson.

The Devons are pre-eminently the race for all New England, and should fill it everywhere. The right ones, weight for weight, can equal any for the pail, for slaughter; and concededly can excel all others for the yoke. But let New England breeders see that they get the proper ones. Possessed of such they can produce as much beef, milk and butter from a given quantity of land, or food, as with any other race of cattle, and on light land more. But to do this, they must change nine-tenths of all the Devons now in the country. I think the spirit is awakened that will ere long accomplish this, and I for one shall rejoice in it. But this will be delayed or defeated if the belief be induced that now the Devons are as a race in America either good in carcass, or abundant in milk. They are, as a race, neither, and the sooner this is understood the sooner will improvement commence, and the more rapidly will it progress.

AMBROSE STEVENS.

New York city.

DECEMBER. — "Old Mr. December" has arrived. He has nipped off the days at each end, and stuck the pieces on to the nights, probably by way of revenge on lovely June, for having done the very reverse. We are inclined to think it is a good move with both. The days are so cheerful and pleasant in blooming, leafy, hopeful June, that if we cannot have more of them, it is well to have them made longer by robbing the nights;—and the days are so chilly and cheerless in December, with the flowers all killed, the leaves all fallen and birds all fled, that it is no matter how short they be.—*Maine Farmer.*

COOKING AND DIGESTION.

A mixed diet of bread, meat, and vegetables, is better than any of the three alone; meat satisfies the appetite more completely and for a longer time than either of the other two; and, if a choice must be made between bread and vegetables, the bread should be chosen. Most kinds of game are easy of digestion. Roast beef and mutton are the most easy of digestion of all butcher-meats. It is a fact worth remembering, that roasting and broiling are the modes of cooking meat which best suit the stomach; this is proved by a comparison of the time required for the digestion of different sorts of food. Thus, beef or mutton roasted or broiled, rather underdone, are digested in three hours—

	Hours.
Pork, broiled.....	3½
Salt pork, broiled.....	4½
Pork, roasted.....	5½
Salt beef, cold, boiled.....	4½
Soft eggs.....	1 to 3
Hard boiled, or fried eggs.....	1½
Veal, broiled.....	1½
Veal, fried.....	2
Heart fried.....	4
Rice.....	1
Milk, boiled.....	2
Bread.....	3½

Fruit and vegetables require from two to four hours, according to quality and mode of cooking. Potatoes roasted and baked, and raw cabbages, are digested in two hours and a half; but boiled potatoes need another hour, and boiled cabbage with vinegar, four hours and a half.—*Family Economist.*

LYCEUM LECTURE.

We had the pleasure of listening to a lecture from Dr. J. REYNOLDS, of Concord, before the citizens of that town, on Wednesday evening, the 8th inst. His subject was *Vegetable Chemistry*.—He first spoke of the wonderful and beautiful processes going on around us, all acting harmoniously for a common end, and thus proclaiming their common origin. To the careless observer all appears to be a conflict of elements—but the student of nature discovers unity in diversity, beauty in deformity, &c. Uniformity is the great law of nature. *Art*, by varying the circumstances under which the laws of nature are excited, may vary the result, and on this important fact rests the hopes of the farmer. Work, work, is the great law of life. When living beings cease to work, the life that is in them goes out. Place a seed in the earth, and its oxygen goes to work; its rootlets strike into the earth, and its plumule into the air, and these are the sources through which its nutriment is to be derived. The under surface of the leaves, studded with little mouths which stand open to drink up the carbonic acid from the atmosphere, is the source from which the frame of the plant, the woody fibre, is obtained. He spoke of the analogy between the embryo plant and animals, that after arriving at a certain stage of maturity, they are prepared to derive their nutriment from bodies in contact with them; also of the formative process, the most important in vegetables. Nature

never makes mistakes. The blade of wheat never produces a kernel of rye; the pear on a quince stock produces pears. The leaves are the laboratory of nature—they prepare the sap for the various products of vegetation, and perform the office of lungs. Water and ammonia are decomposed in the leaf, and oxygen and nitrogen thus obtained. The mineral kingdom, he said, furnishes nutriment to the vegetable, and the vegetable to the animal. Carbon is the most abundant material used. Carbonic acid when not mixed with a due proportion of air is fatal to animal life; but from this poison is elaborated by the leaf, the very food by which all life is sustained. He then spoke of the abundant supply of carbon in the immense coal beds and in primeval vegetation.

He then briefly spoke of the influence of the solar light. Sunlight is the motor engine by which the vegetable machinery is kept in motion. Oxygen the great analytical power in nature; its affinity for certain substances occasions the most intense and ceaseless activity, of which he gave examples. He then made some general remarks upon the modes of cultivation—soils and plants suited to each—elements needed for rapid development—easiest and cheapest modes of supplying them, and closed with some observations upon a proper education for the farmer.

The lecture was highly interesting, instructive and useful, and among the best we have ever listened to before that Lyceum. We do not hesitate to recommend it to those wanting a lecture for lyceums, farmers' clubs, or any gathering where the practical and useful is preferred before the miserable speculations so frequently uttered in these social gatherings.

FARMING.

If one-half the zeal, energy and expense that blots so many gazettes with low and coarse abuse, setting the whole community by the ears for the vain and paltry purpose of a few demagogues and office seekers, were bestowed on the advancement of agriculture; if the people were half as ambitious to improve and beautify their fields, as they are to settle the affairs of the nation; and half as angry with thistles, thorns and poor fences, as they are with their political opponents, who probably wish as well to the country as they, we should have more productive fields, less complaints of poverty, more ability to be charitable and munificent, and abundantly more good feelings. From Pittsburg to New Orleans the son plows as his father did before him, and the great mass of farmers are as stationary in theory as they are in practice. Nine in ten believe at this moment, that book farming is the mere useless, visionary dreaming of men that know nothing about practical agriculture.

We would tell them that England is the garden of Europe simply because almost every acre of the ground is cultivated scientifically, and on principles which have been brought to the test of the most rigid and exact experiment. We would

tell them that New England, of whose soil and climate they are accustomed to think as consigned, by Providence, to sterility and inclemency, is the garden of the United States, only because the industrious and calculating people do not throw away their efforts in the exertion of mere brute strength—but bring, mind, pain, system and experience to bear upon their naturally hard and thankless soil.

On every side the passing traveller sees verdure, grass and orchards in the small and frequent enclosures of imperishable rock, and remarks fertility won from the opposition of the elements and nature. After an absence of ten years, on our return to our country, we were struck with this proud and noble triumph conspicuous over the whole region.

The real benefactors of mankind, as St. Pierre so beautifully said, are those who cause two blades of wheat to mature where one did before. The fields ought to be the morning and evening theme of Americans that love their country. To fertilize and improve his farm, ought to be the main object of the owner of the substantial soil. All national aggrandizement, power and wealth may be traced to agriculture, as its ultimate source. Commerce and manufactures are only subordinate results of this main spring.

We consider agriculture as very subsidiary not only to abundance, industry, comfort and health, but to good morals and ultimately even to religion. We shall always say and sing, "Speed the plow."—*Rev. T. Flint.*

CHANGE OF TIMBER FROM CLEARING LAND.

There are few things connected with the natural history of trees or plants more surprising or that has occasioned more speculation than the changes that not unfrequently take place in the growth of timber after clearing, from what it was before that operation. So inexplicable is this change in many instances on the commonly received principles of vegetation, that it has been adduced by the believers in the doctrine of spontaneous production as one of the strongest supporters of their system. We think, however, that singular as the phenomena may be, its solution cannot require a supposition so unphilosophical.

In the Southern States, where the timber is principally pine, when that is cleared off, a growth entirely different, and composed of such as was unknown to the place before it, springs up; and this when cut off is not unfrequently succeeded by new varieties, or perhaps by a return to pine. Lands covered with oak and chestnut, or such timber as shoots up from the stumps of cut trees, do not change the timber except in a small degree; it is on those lands covered with timber that requires to be propagated by seeds that this change is most apparent. Everybody must have noticed in what numbers a species of wild cherry will spring up where the forests are cut down, or are propagated by winds, though that particular kind is rarely or never found growing in the unbroken forests.

More than thirty years since, a part of our farm was cleared of its timber, a dense growth of maple, basswood and elm. A small piece of perhaps half an acre was separated from the rest by a narrow ravine after being cultivated three or four years, and part of it planted out as a nursery of fruit trees; it was left to itself. It was soon

covered with young trees, which were suffered to grow unmolested, and there are now on this small spot, white oak, black oak, butternut, white poplar, common willow, walnut, hickory and black cherry, of all varieties, of which not one was growing near at the time it was cleared, and most of them not within three-fourths of a mile. An explanation we leave to others.—*Warren Journal*.

HARVEST HYMN.

BY ALONZO LEWIS.

We thank thee, God of Harvest Home! for what thy love bestows,
For all the varied Providence that from thy bounty flows;
We thank thee for the vernal showers that fertilized the ground;
We praise thee for the genial suns that all man's labor crowned;
We thank thee, God of Harvest Home! for all our wealth of grain;
For the tall wheat whose waving mass like ocean filled the plain.
We thank thee for the fruitful yield of bright and yellow corn;
Whose golden heaps luxuriously our fertile fields adorn.

We thank thee, God of Harvest Home! for all thy fruit so fair,
The apple, with its yellow cheek, the ripe and mellow pear;
The downy peach, the luscious plum, the purple clustered vine,
And the bright show of radiant flowers that in our garden shine.
We thank thee, God of Harvest Home! for more than we may tell;
We thank thee for the fragrant hay that fills our barns so well;
We praise thee for the varied gifts that form our harvest feast,
And the choice store of healthful roots, a sweet food for man and beast.

We thank thee, God of Harvest Home! that while in other lands
Pale famine stalks and sweeps away their fever stricken bands,
Our homes are blessed with health and love, with plenty and with joy,
While social and domestic peace yield bliss without alloy.
We thank thee, God of Harvest Home! for all that we partake;
Then let our hearts with gratitude, their hymn of praise awake;
And when our day of labor past, death's harvest hour shall come,
May all our souls, like ripened fruit, be safely garnered home

APPLES AS FOOD FOR STOCK.

The late Payne Wingate, of Hallowell, Maine, made some experiments in feeding pigs with apples compared with potatoes. Both the apples and potatoes were boiled, or rather stewed, separately, and about four quarts of oat and pea meal mixed with each bushel, at the time the cooking was finished—the meal being intimately incorporated with the potatoes and apples while they were hot, and the mass left to ferment, slightly, before it was fed to the pigs.

Two pigs of the same litter, and as near as practicable, of the same weight, were taken; one was fed for a week on a given quantity of the cooked potatoes per day, and the other on the same quantity of apples. At the end of each week the pigs were weighed, and the food was reversed—the pig to which potatoes had been given, was fed with apples, and the one which had received apples, was

fed for the next week on potatoes. This course was continued through several weeks—the food of each pig being changed every week. The result was, that the apples proved to be fully equal, or somewhat superior to the potatoes. In this instance the apples were mostly sweet, and they, as well as the potatoes, were nearly in a ripe state.

On another occasion Mr. W. experimented with sweet, compared with sour apples, in various ways. He found that when they were fed *raw* to swine, the sweet apples were preferable—the animals ate them better, as the sour apples seemed to make their teeth sore; but when both were cooked and mixed with meal in the way above described, there was no difference in the gain produced by an equal quantity of each. It should be stated, however, that all the apples used were of palatable kinds, nearly ripe; and that unripe and ill-flavored apples are known to be less relished by stock, as well as less nutritive. It is probable, also, that when sour apples are eaten raw, and in considerable quantities, the animal may take into the stomach too large an amount of acid, which may tend to derange the digestive organs. This objection would be chiefly obviated by cooking, and the saccharine fermentation, by which the pulp loses much of its acid, and becomes nearly sweet. It does not appear from analysis, that the amount of actual nourishment is much greater in sweet than in sour apples.

Mr. Wingate practiced fattening swine for several years, on food composed principally of apples. The animals attained good weights, and the pork was solid and of excellent quality. In other instances, we have known apples fed raw to horses, cows and other stock through the winter, with much advantage. For using in this way sweet apples would probably be best, and they should be such as will keep till spring. They may be stored in a cellar under the barn, or in the bottom of the hay mow—a proper place having been left for that purpose when the hay was put in. They will be more likely to be injured by heating than by freezing. They will seldom freeze in such a situation as is mentioned; and if they should be touched by frost, their nutritive properties will not be much lessened, if they remain in a dark place, and where they will thaw slowly.

A peck of apples a day, fed to a cow, has been found to add more than a quart to the daily quantity of milk, beside greatly increasing its richness, as well as improving the condition of the cow. The effect of apples is equally favorable to other stock. Horses fatten on them, and their coats assume the brilliancy which hardly any other food will give them. For all stock they answer a similar purpose as vegetables, in preventing costiveness, which is likely to ensue from the exclusive use of dry food; and in this way, and by the nutriment they contain, they contribute much to the animal's thrift.

An impression prevails that apples will dry up the milk of a cow. This idea has been imbibed either from the effect produced on a cow by eating a very large quantity of apples at once, by which surfeit and fever were brought on, or from the trial not being properly conducted till the animal had become habituated to the food. The ill effects attributed to apples would have occurred with any other rich food, as any kind of grain, potatoes, or other vegetables.

A fair average product of an acre of orcharding, in good bearing condition, may be estimated at two hundred to three hundred bushels a year; and at this rate, we doubt whether so great an amount of animal nourishment can be obtained from the same extent of land, in proportion to the expense, by any other crop. We should not hesitate, therefore, to recommend the cultivation of apples as food for stock.

THE ROCKINGHAM FAIR.

Pursuant to notice, a meeting was held at the Town Hall in Exeter, for the purpose of forming a County Agricultural Society, on Thursday, the 28th day of October.

The meeting was organized by the choice of HENRY F. FRENCH, Chairman. WM. H. HILLS, Clerk, pro tem.

After some discussion touching the general objects of the meeting, a committee of three was raised to report a Constitution.

After a short adjournment the Committee made their report, and an interesting discussion upon the several articles of the Constitution as reported followed.

The Constitution as finally adopted is as follows:

CONSTITUTION.

1. This Society shall be styled "THE ROCKINGHAM FAIR."
2. Its object is the improvement of Agriculture, Horticulture, and the Mechanic Arts in this County.
3. Its officers shall be a President, four Vice Presidents, a Secretary, Treasurer and three Trustees, and a Collector for each town.
4. The President, Secretary and Trustees shall constitute the *Executive Board*, of which the President shall be Chairman, and the Secretary, Clerk. This Board shall by a major vote manage and control all the affairs of the society, and adopt all such measures to promote its objects as they think proper, subject, however, to the direction of the society, at any regular meeting, and to its by-laws.
5. The President, Secretary, and Trustees, shall be elected by ballot, at the annual meeting. All other officers shall be appointed by the Executive Board, except such as may be elected at the annual meeting, in such manner as the meeting shall direct.
6. The Secretary shall keep a fair record of all the transactions of the society, and of the Executive Board. The Treasurer shall keep a correct account of all money received and expended, and shall give bonds as the Trustees shall direct. Their records shall be, at all times, open to the inspection of any member.
7. The annual meeting shall be held in the Autumn, at such time and place as shall be appointed by the Executive Board.
8. Members shall be admitted, on such terms as shall be, from time to time, prescribed, and the society may assess such members not exceeding one dollar year, each.
9. Any person paying five dollars at one time to the Treasurer, shall be a *life member*, and shall not be liable to assessment for five years.
10. The foregoing articles may be altered, at any annual meeting, by a vote of two-thirds of the members present.

A committee of ten was then raised to report to the meeting in the afternoon a list of officers to be balloted for under the fifth article, when the meeting adjourned to two o'clock, P. M.

At the afternoon session, the last named Committee made their report, and an election of officers took place under the Constitution, and the following gentlemen were with almost perfect unanimity elected for the ensuing year:

HENRY F. FRENCH, of Exeter, *President*.

JOSEPH T. GILMAN, of Exeter, *Secretary*.

JAMES PICKERING, of Newington,

JOSIAH BARTLETT, of Stratham,

MOSES EATON, Jr., of S. Hampton,

DAVID CURRIER, of Derry,

WINTHROP H. DUDLEY, of Brentwood,

THOMAS J. MELVIN, of Chester,

JOHN M. WEARE, of Seabrook,

Vice Presidents.

Trustees.

After this organization, the Chairman gave notice that he had received the names of seventeen gentlemen from Exeter, who desired to become Life-members, under the 9th Article of the Constitution, and gave their names. Two other citizens of Exeter added theirs on the spot, when gentlemen of other towns followed the example, until *fifty-three* members had subscribed,—thus raising a fund at once of \$265.90.

A suggestion was made that measures be taken forthwith, to raise a fund of \$5,000, by the admission of Life Members, to place the Society beyond the chance of failure. The whole matter was left with the Executive Board.

It was voted that the publishers of all papers in the county and also of the *Granite Farmer*, be requested to publish the proceedings of the meeting, and the meeting adjourned without day.

The following is a list of the members who have already joined the Society as life members. The whole number is *eighty-three*.

At a meeting of the Executive Board in the evening, Retire H. Parker, of Exeter, was appointed Treasurer.

Exeter.—J. T. Gilman, H. F. French, Nath'l Gilman, Jeremiah Robinson, Retire H. Parker, Nath'l Gordon, Jos. G. Hoyt, Isaac Flagg, D. W. Gorham, John Hoyt, Orin Head, Daniel Melcher, Wm. P. Moulton, Wm. Conner, Geo. G. Smith, J. W. Odlin, R. F. Goodwin, J. H. Shapley, Amos Tuck, John F. Gould, Sam'l B. Clarke, S. W. Leavitt, A. P. Blake, Abner Merrill, Wm. Wadleigh, Charles D. Towle, Jos. B. Flagg, A. S. Thayer, A. W. Lovering, Charles Conner, Thomas Conner, John P. P. Kelley, E. S. Durgin, Geo. Gardner, Asa Jewell, Wm. B. Morrill, S. W. Dearborn, J. O. Long, John Sullivan, E. H. Valentine, Joseph L. Ciley, John Dodge, C. T. Bunker, Samuel H. Stevens, Timothy Tilton, S. H. Piper, Joshua Getchell, Jacob Carlisle, Jewett Conner, Daniel F. Hayes, Edmund Elliot.

Stratham.—Josiah Bartlett, J. H. Diman, Franklin Clark, J. B. Wiggin, John E. Wiggin, Geo. Wingate.

Kingston.—Gideon Webster, William Webster, J. M. Bartlett.

Danville.—Wm. Hoyt.

South Hampton.—Moses Eaton, Jr.

Newmarket.—B. B. Tuttle.

East Kingston.—James M. Sanborn, R. W. Currier.

Plaistow.—Levi B. Tucker, Wm. H. Hills.

Kensington.—Joseph Brown, Stephen Brown.
Chester.—Thos. J. Melvin, S. F. Learnard.
Derry.—David Currier, Richard Melvin.
Brentwood.—Winthrop H. Dudley, T. S. Robinson, Frederick Robinson.
Hampton Falls.—Geo. H. Dodge, John W. Dodge, Wells W. Healey, John Wear, Jos. H. Wear, Jos Cram.
Hampton.—Robert F. Williams.

For the New England Farmer.

A FARMER'S FIRESIDE TALK—GROWING CORN—HILLING UP.

Now that the hard work is through, the corn in the crib, "the deposits removed" from the barn yard to the old field, and the turf, mulch and scrapings hauled and spread into the cattle yard, we have leisure for a little talk among ourselves; and as I have come over to spend this evening with you, Mr. Brown, by the fireside, I want to talk with you about corn. That, I think, is one of the best crops that I have commonly raised on my poor farm, and I want to get at the best way of working it. I follow the old plan. I work now pretty much as they have worked corn in this neighborhood, as long as I remember. I am one of those, as you know, who haven't thought much of science, in farming business, and haven't believed in the benefits of book farming; but I like to talk with my neighbors and find out whose way is the best. When I was up to the fair, a few days ago, I heard a man, he was a stranger to me, talking some about corn. He had a good deal to say against hilling up and topping, in particular. He talked as near as I can recollect, about in this way.

"One of the great troubles against which the English farmer has to guard, is too much wet.—The climate of England is a very moist one. To prevent injury from this excess of moisture, the English farmer hills up his vegetables, in some cases, or in others, makes a ridge, which serves of course to shed the water, in some measure, and thus preserves the crop from too much excess of wet. Our fathers, when they came from England and made farms in this country, did not know the great difference in the climate, and inconsiderately, no doubt, followed the same course here, that they had there. When, after some trial of the climate, they came to perceive that this was the opposite of that of England, and that here the farmer had to combat the drought, as he had there the wet, they had already become fixed in their mode of cultivation. And you know when a farmer has got fixed, it is easier to get out a loaded wagon that is hub up in the mud, than to unfix him, especially if he is one of the English or Anglo Saxon breed. Our crops here seldom suffer from too much moisture, but they frequently are injured by drought; sometimes wholly destroyed by it. Now there cannot be a question that hilling up aggravates the drought. Hilling or ridging sheds the water, and turns it away from the roots, and when the rain is a light one, it will frequently wholly prevent the roots from feeling it, while if not hilled up, the wet would go to the roots. Now moisture is of as much benefit to the roots as manure is, especially in the early part of the season, before the plant begins to take in moisture by the leaves, which is not till near midsummer. It

is not only absolutely essential to the sprouting of the seed, but it furnishes ammonia to the plant in its aftergrowth, and in this it does the same office as the manure."

"Well," says I, "neighbor, I don't know as it is going to make so much difference; but I shouldn't like to raise corn without hilling up; and I don't believe it can be done either, so as to come to any thing. Why corn couldn't stand up, unless it was hilled. It grows in such a way, throwing out roots to the side of the stalk, and these roots will be above ground and have nothing to hold to if they are not hilled."

"Have you tried that?" said he.

"No, I have not," said I.

"Well, if you try it, sir," said he, "you will find it to be a mistake. The corn which is raised in the Southern and Western States is about double, or more than double, the weight of that which we raise here. It grows ten to twelve feet high, and the stalk is nearly or quite double in size to ours; and in the West, they raise that kind of corn without hilling, and it stands up well. There are commonly a great many roots bare where they put out from the stalk, but they get hold of the ground, and there is no trouble; and that in a light soil, too.

"It is a bad plan, too," said he, "to cover the roots of anything too deep. The roots must have air. While they are pushing into the ground and drawing nourishment from that, they draw it too, at the same time from the air, and if the roots are covered too deep, they will be smothered, and the growth of the plant checked. I have seen farmers cover three inches, and then hill up five or six. Now it is quite deep enough to cover from one to two inches; and there should be no hilling over this in our climate. The hoeing should be only to kill the weeds and to stir the ground; and when stirred, the ground should be left as flat as possible around the corn, so that the water should not be shed from it, and never more than two inches over the roots. In this climate, dishing would be better than hilling."

He said it was some years since he had raised corn. Since he had lost his wife, and having other business, he had let his farm. He used to raise corn in the old fashioned New England way. But if he ever tried it again, it would be in the way he spoke of.

He had a good deal to say, too, about topping corn. Some of it, I have heard before, and some of it I never heard before. What he said about the ear being nourished by the leaves, from the air, and not by the roots from the ground, seemed to me to be curious. But it would take a considerable time to tell all he said about this; and as I want, after I have heard what you think about his ideas of planting and hilling up, to talk about some other things, some neighborhood matters, I will not now say anything more on corn at present. I should like to know what you think about this hilling up, for it did seem to me to be reasonable that heaping up the ground about corn as I and my neighbors do, must have the effect to turn off the rain from the roots,—and we never have too much rain, that's a fact. We hardly ever get so much rain as the corn wants; and some years it gets pretty well pinched by drought. I want to know what you think of this, and I shall be in

again this week, another evening, and I will then tell you what he said about topping.

Essex, Nov. 30.

W. J. A. S.

REMARKS.—Well, I think you got hold of an interesting "stranger up there to the fair," whose notions about corn are very good. Don't fail to call as you propose, for I shall be impatient to talk with you again about these things.

LAYING OUT SURFACES.

A few simple rules are oftentimes convenient to those who are not conversant with surveying operations, and a writer in the *Western Horticultural Review* has communicated to that work some very good ones, some of which we copy, and to which we add a few others.

To lay out an acre in a circle. First fix a centre, and with a rope as a radius, seven rods, three links and three-eighths long, one end attached to the centre, and kept uniformly stretched, the sweep of it at the other end will lay out the acre.

For one quarter of an acre, a rope three rods and fourteen links will be the right length.

For one-eighth of an acre, a rope two rods and thirteen links will be enough.

Triangles.—If you wish a triangle to contain just an acre, make each side nineteen rods, five and a half links long.

A triangle whose sides are six rods and twenty links long each, will contain one-eighth of an acre.

To lay out an ellipse or oval.—Set three stakes in a triangular position. Around these stretch a rope. Take away the stake at the apex of the triangle, which will be where the side of the oval is to come—move the stake along against the rope, keeping it tight, and it will trace out the oval.

A square, to contain an acre, or just one hundred and sixty rods, should have each of its sides just twelve rods, ten feet and seven-tenths long.

To draw an oval of a given size.—The long and the short diameter being given—say twenty feet for the shorter, and one hundred for the longer—divide the short diameter into any number of equal parts—say ten—and from each point draw a line parallel to the long diameter; then divide the long diameter into the same number of equal parts, (ten) and from each point draw a line parallel to the short diameter. Then draw a line from point to point where each corresponding line cuts the other, on the outside, and this connecting mark will describe the oval or ellipse required.—*Maine Farmer.*

WINTER LECTURES.—The particular attention of the reader is called to a communication in another column on this important matter. We agree with the writer in all the positions he takes, and should be glad to be instrumental in calling the attention of curators in every town in the State to this subject. There is a foolish notion prevailing, that Lyceums must be supplied by professed lecturers, who, alone, are qualified to amuse or impart instruction. Let the merchant, the mechanic, the farmer or sailor take the platform in turn with those who have, heretofore, almost exclusively occupied the ground, and the world will grow wise quite as fast.

OFFICERS ELECTED.

Of the N. H. STATE AGRICULTURAL SOCIETY for 1852-3:—

President—D. P. P. WOODBURY, Bedford.

Vice Presidents—John H. Steele, Hillsboro' County; A. B. Clowson, Grafton; Austin Corbin, Sullivan; David Buffum, Cheshire; Samuel Bean, Belknap; Levi Bartlett, Merrimack; Samuel Bean, Carroll; Joseph Cilley, Rockingham; William Halle, Strafford; John P. Pitman, Coos.

Executive Committee—H. F. French, Exeter; John Wadleigh, Meredith; Thomas H. Leverett, Keene; N. B. Baker, Concord; Wm. Tenney, Hanover.

Secretary—J. S. Walker, Claremont.

Treasurer—Frederick Smyth, Manchester.

Auditors—{ Daniel Clark, Manchester.
Brooks Shattuck, Bedford.

HILLSBORO' AGRICULTURAL SOCIETY, N. H. — At their late annual meeting, this society elected for

President—BROOKS SHATTUCK, Bedford.

Vice Presidents—J. M. Tyler, Pelham; Hiram Munroe, Hillsboro'; Jonathan Russell, Mason; C. E. Potter, Manchester.

Recording Secretary—Moody Hobbs, Pelham.

Corresponding Secretary—A. G. Comings, Mason.

Treasurer—David Stuart, Amherst.

CHELMSFORD ASSOCIATION.—At the annual meeting of the Chelmsford Farmer's and Mechanic's Association, the following persons were elected as its officers, viz.:

President—Dr. J. C. BARTLETT.

Vice President—Capt. Asa Hodgman.

Secretary—E. H. Warren, Esq.

Treasurer—Joseph Reed, Esq.

Executive Committee—Joseph Warren, Jr.; Sewall Parkhurst; Charles T. Bird; Charles Proctor; F. S. Sawyer; E. P. Spalding; David Penham.

DOMESTICATION OF WILD ANIMALS.

Among the animals over which God has given dominion to man, and which are fitted for domestic uses, there are several on this continent waiting to be subdued, and brought into service. We are glad that public attention is to be directed to this subject. The agricultural portion of the report of the Patent Office for the present year, contains an elaborate article upon it, from the pen of Prof. Spencer F. Baird, of the Smithsonian Institution, and the proposition to publish one hundred thousand copies for distribution having prevailed in Congress, the people will have in their possession the necessary information, and can hardly fail to give it their earnest consideration. The animals, as we understand, which are particularly named, are the moose, the reindeer, the elk, the buffalo, the sheep and goats of the Rocky Mountains, and the antelope. The reindeer, as is well known, is an animal of great speed and endurance, and the moose adds to these qualities immense strength. These animals are found along our northern frontier, especially in Maine, and are so perfectly adapted to the climate and the country, that they may be regarded as indispensable to the full development of the high latitudes of the continent. The reindeer would be of greater service in the British possessions than with us, but the moose might be introduced throughout our northern States with very great advantage. Fully equal to the horse in weight, they are more cheaply fed; their strength is greater, and their speed is fully twice as great. Added to this, they are useful as an article of food. Domesticated, all their native qualities would be improved. They would attain larger size and finer form, as well as increased

strength and speed. Their horns could be removed by the same process which would temper the ferocity of the male. On branch railroads a moose would draw a car with ease at the rate of fifteen to eighteen miles an hour, and on plank roads they might be driven with ease from twelve to fifteen. Over our Western prairies, they would fly as on the wings of the wind. They have been used in the high latitudes of Europe, and the accounts of their fleetness are almost incredible.—Indeed, in one case at least, their use was forbidden by law, because criminals once mounted upon them, were utterly beyond reach of their pursuers. It is believed that even the generation taken wild, can be rendered as docile as other domestic animals. In the more southern latitudes of our country, the elk can be used for similar purposes. The elk is smaller but not less fleet, and though feeble for draft, would be found perfectly fitted to scour the prairies and plains of the southwest.

The buffalo which is disappearing before the march of civilization, is more profitable for beef than the ox, more powerful for draft, and travels at greater speed. The milk of the female yields a larger proportion of cream. The skin is of equal value, and the hair can be woven into coarse fabrics. The process of introducing this animal into use has already commenced. They are domesticated in considerable numbers in Kentucky and Missouri, and can be used in every latitude from our northern to our southern frontier.

The Rocky Mountain sheep furnishes no wool, but is valuable for its mutton, which is regarded as superior to any other which is known. This animal is very large, the best specimens weighing from three hundred to four hundred pounds. Domesticated, its size would be increased, and its quality improved. The antelope is much smaller, and would be valuable for the same use—as an article of food only.

The Rocky Mountain goat whose home is in the clouds, furnishes wool of more excellent quality than the finest cashmere—a fact sufficient of itself to justify every exertion to bring it into use.

All these animals (besides varieties of the deer species, which we have not named) belong to the undeveloped resources of our continent and our country. They wait, as blessings of divine Providence, to be appropriated and used by man. That the suggestions of science will in time be reduced to experiment and success, does not admit of doubt. Attention cannot be called to such a subject in vain. We need an Agricultural Bureau at Washington, and appropriations by the general government to enable it to perform just such services as are here named. Such services are for the common benefit, for the common wealth and comfort, and would command common concurrence. It is time that farmers demanded of the government an interest in their affairs, and that the government should reduce to success experiments which are too large for individual enterprise.—*Watchman and Reflector*.

A MONSTER PEAR.—Mr. Edward Gould has raised in his garden in this city, the present season, some Bartlett pears, which in size go a little beyond any fruit of the kind we ever heard of. One of them measured a foot in circumference, lengthwise, and ten inches transversely, and weighed 11 3-4 ounces. Another weighed 19 1-2 ounces.—*Portland Adv.*

For the New England Farmer.

ON VENTILATION.

MR. EDITOR:—I see in a late number you have made some remarks on ventilation. No one that is sane can for a moment doubt the consequences that follow from having their rooms inclosed nearly air tight, which must be the case, after blocking up the fire-place, and with no other means made use of for ventilation. We need not wonder that so many die of consumption. Look at the countenances of the people, especially females, and one must be convinced, that a foul atmosphere is the main cause of their debility. I have been much about large stores in cities and large towns, and 'tis all the same. I find almost all the young men and females have the same sallow and unhealthy countenances. The same evil is in dwelling-houses, whether occupied by rich or poor. I have been in many cooking kitchens at hotels, that are much frequented by the wealthy, and they little dream what a place is used; it is called a kitchen, but from want of ventilation, is often a horrible place, and all from want of knowing how to ventilate. Nothing is more easy than to ventilate rooms, large or small; and nothing is more conducive to health. The present system ruins, without their knowing the cause, the health of thousands of young people.

Very many of these ill-ventilated rooms, are the dwellings of the poor tailor, and dress-maker, and of other sedentary occupations who make the beautiful dresses for the ladies, and the superfine for the gents; and we need not wonder if some virulent disease at times makes its appearance; and when it does take place, we complain, and say it is the will of Providence, forgetting that nature's laws have been violated. **SAMUEL CLARK.**

April, 1852.

MARKHAM'S FAREWELL TO HUSBANDRY.

We continue below two or three extracts from the old book, *Markham's Farewell to Husbandry*, to which we recently alluded. The part of the work from which we quote now treats of the orchard and garden, and is printed in the old English black letter. The first extract we make is of the "distance of trees," and the second, from the *poetry* of the work, in relation to the honey bee.

DISTANCE OF TREES.

I know not to what end you should provide good ground, well fenced, and plant good sets; and when your trees should come to profit, have all your labours lost, for want of due regard to the distance of placing of your trees. I have seen many trees stand so thicke, that one could not thrive for the throng of his neighbours. If you doe marke it, you shall see the tops of trees rubd off, their sides galled like a galled horses backe, and many trees have more stumps than boughs, and most trees no well thriving, but short, stumpyish, and evil thriving boughs: like a corne-field over-fedded, or a towne over-peopled, or a pasture over-laid, which the Gardiner must either let grow, or leave the tree very few boughs to beare fruit. Hence small thrift, galls, wounds, diseases, and short life to the trees: and while they live greene, little, hard, worme-eaten, and evil thriving fruit arise, to the discomfort of the owners.

To prevent which discommodities, one of the best remedies is, the sufficient and fit distance of trees. Therefore at the setting of your plants you must have such a respect, that the distance of them be such that every tree be not annoyance, but an helpe to his fellowes: for trees (as all other things of the same kinde) should shrowd, and not hurt one another. And assure your selfe that every touch of trees (as well under as above the earthe) is hurtful. Therefore this must be a general rule in this art: That no tree in an Orchard well ordered, nor bough, nor Cyon, drop upon, or touch his fellowes. Let no man thinke this impossible, but looke into eleventh chapter of dressing of trees. If they touch, the winde will cause a forcible rub. Young twigs are tender, if boughs or armes touch and rub, if they are strong, they make great galls. No kinde of touch therefore in trees can be good.

COMMONWEALTH OF BEES.

When I had view'd this Common-wealth of Bees,
Observ'd their Lines, their Art, and their Degrees:
As; how, beside their painefull *Vulgar ones*,
They haue their *Princes*, their *Captaines*, and their *Drones*:
How they *Agree*; how temp'rately they *Feed*;
How curiously they *Build*; how chastly *Breed*;
How seriously their *Bus'nesse* they intend;
How stoutly they their *Common-good* defend;
How timely their *Provisions* are provided;
How orderly their *Laborers* are diuided;
What *Vertues* pat'rnes, and what grounds of *Art*,
What *Pleasures*, and what *Profits* they impart:
When these, with all those other things I minde
Which in this *Booke*, concerning *Bees*, I finde:
Me thinke, there is not halfe that worth in *Me*,
Which I haue apprehended in a *Bee*,
And that the *Pismers*, and those *Hony-flies*,
Instruct vs better to *Philosophize*,
Than all those tedious *Volumes*, which, as yet,
Are leaft vnto vs by meere *Humane-wit*.
For, whereas those but only *Rules* doe giue:
These by *Examples* teach vs how to lue.

For the New England Farmer.

APPLES FOR FATTENING STOCK.

MR. EDITOR:—I do not pretend to be much of a farmer, but a kind of Jack at all trades. As there is so much difference of opinion, however, as it regards apples fed out to stock, I will give the result of my experience. I had a cow that was 12 or 13 years old last spring; she had a calf one year ago last April; she has been milked every day since, till the 28th of Nov. last, which was the day but one before I killed her; her time would have been out to calve Feb. 14, 1853. All the extra feed I gave her besides apples, was 7 bushel baskets of what is termed cow corn in the ear; I was 35 days a fattening her, and there was one week in the time that she gained 32 lbs.; she was pronounced by good judges to be as good beef as they had seen this year, I have not eat any better this two years.

Yours, J. N. P.

Georgetown, Mass., Dec. 6, 1852.

A HINT.—Many large limbs have fallen from the trees in the woodlot. If you have a spare day before snow falls to cover them, go through your lots and pick up what is worth saving, and which if left till covered with snow would be lost. If you cannot do it yourself, invite your poor neighbor to do it for himself. Better it made his family comfortable in the cold winter approaching, than that it rotted on your land.

POULTRY RAISING.

At a recent meeting of the Concord Farmer's Club, the question being, "Is the raising of poultry profitable?" Mr. JAMES P. BROWN said he had entertained the opinion that the raising of poultry could not be made profitable among the farmers in Middlesex county. His sons, however, having a different opinion, a year ago he proposed to sell them all his poultry, and purchase of them what eggs and chickens he wanted for the family, upon the condition that they were to keep an accurate account of expenses, and make a true return to him at the end of the year.

Before coming in to the meeting he had called upon them for a return up to this time, the period including nine months, and the following is their statement:

Had on hand, March 1, 1852, 36 fowls, valued at.....	\$10.00
Cost of keeping, consisting of corn, meal, potatoes and meat.....	19.65
Received for 32 pairs chickens sold.....	28.3
For eggs up to Dec. 1.....	19.91
Have now 52 fowls worth 35 cents each.....	27.35
Expenses.....	29.65
Profit in 9 months.....	\$15.02

He had seen from day to day how the fowls had been taken care of, and after reading this statement, had changed his opinion, and now believes that poultry may be profitably raised in Middlesex County, by bestowing upon it the same attention that is given to other farm stock when well taken care of. These fowls were plentifully supplied with such food as is accessible to all who usually keep them—corn, oats, meal, potatoes, and occasionally fresh meat, such as the plucks of sheep, or the flesh of young calves, many of which are killed at the age of three or four days by those who are selling milk.

Mr. JACOB B. FARMER said a few years ago he thought he knew something about fowls, but recently had almost come to the conclusion that his knowledge was not to be relied on. He had often found as much clear profit from a single hen through the winter as from a cow. Had frequently got \$1.50 per bushel for the grain fed to them, and had received as high as \$2.40 a bushel. They should be kept, he said, in a dry, warm place. During the last year his fowls had been diseased, and he had received no profit from them whatever. When he had made a profit it was from the native breed.

Mr. C. W. GOODNOW said he had been thinking of Mr. Brown's profits on a single hen, and that they would be about 500 per cent. on the investment. He thought Mr. B.'s opportunities for keeping fowls very advantageous; his own advantages were not so good, but he thought they afforded a fairer opportunity to get at the actual profits than where they are running on the farm. He had only an acre or two of garden, and was obliged to keep his fowls within somewhat narrower limits than the farmer does his. By careful experiment

he had ascertained that each hen requires *one bushel and a third* of grain in a year, which he thought would not be at a less average cost than \$1.33 a year;—then how shall he find his profits? Would she afford him twelve dozen eggs in a year? if so, she would pay cost, but nothing more; in all his experiments, which had been many, he had not been able to derive a profit from them, beyond the keeping of some eight to twelve, which number would provide mostly for themselves while the ground is open.

Mr. SIMON BROWN related some experiences in which he had realized larger profits from the investments made in his poultry than from any other item on his farm.

Dr. J. REYNOLDS said he knew a lad who, five years ago, began to keep poultry. He was the son of a widow. He bought five or six hens, raised chickens, and sold chickens and eggs. He fed largely upon fresh fish. He now has a flock of some fifty hens! has purchased a cow, repaired his little barn, clothed himself, assisted his mother more or less, and is now, from the sale of his milk and the produce of his poultry, quite a thriving young man, accumulating a very pretty capital. Fresh fish is found, near the sea shore, a cheap and excellent food for poultry.

For the New England Farmer.

BIRDS AND INSECTS.

ARE BIRDS USEFUL IN DESTROYING INSECTS, ESPECIALLY CATERPILLARS?

Nobody will deny, that *truth defends itself*, and that it, if hidden for a time, will break forth the more powerfully and shine brightly, illuminating the night of ignorance and error. Still it takes, sometimes, not *years*, but *centuries*, to dispel error, and he who should confide in the hope of an *immediate* acknowledgment of what is true, would be very much disappointed. History teaches but *one single lesson*, viz: THAT NOBODY CARES ABOUT ITS LESSONS.

Not long ago, somebody doubted the usefulness of birds in destroying insects; he was briefly answered in this paper. One should think, that even a man who never examined the stomach of a bird belonging to the Finch tribe f. i.—I need not allude to the *insectivorous birds*; their name being sufficient proof—could for a moment be uncertain, with what kind of food they rear their young. *Nothing is needed but eyes to see*; there are, however, blind who will not see.

Nature is always and everywhere alike herself. Finches, f. i. are Finches in America, as well as in Europe and Africa. They may differ ever so much as *species*, but they do not differ in their general character. They live on grain and insects in America; they feed on insects and grain all over the globe.

There is a sparrow—*Fringilla*, now *pyrgita domestica*—so common in Europe, especially in Germany, and in more than one respect so troublesome, that he is persecuted by everybody; and as he was thought to be very injurious to fields and gardens, the different governments made the law,

that each male individual of age had annually to deliver a certain number of sparrow heads, varying, in different States, from 6 to 12. After this course had been pursued for many years, people began to complain about the scarcity of fruit. There were sections of the country, where the sparrows had been entirely exterminated. Such parts suffered the most, and, instead of the former abundance, their trees yielded no fruit.

Although I was then very little interested in Natural History, yet this fact arrested my attention, especially as I read in a French journal, a remark of a French naturalist—I believe it was *Cuvier*—that the sparrows reared their young with nothing but insects; and that they were leanest in the season of harvest, and fattest in the spring. This struck me as very curious; for whenever I saw thousands of sparrows, united in one flock, falling upon the corn-fields, I imagined that they were devouring rye, wheat, barley, etc. I concluded to ascertain this by a direct experiment. In the following winter (1824) I procured sixty living sparrows. Having made two enclosures in my study, I put twenty-five sparrows in each, ten I caged. All had plenty of sand, brick-dust, lime, etc. I fed twenty-five of them on different kinds of grain; such as wheat, rye, oats, buck-wheat and the like. *Not one of them lived longer than six weeks*; they all died of consumption of the stomach. Twenty-five of them I fed on grain, boiled meat and meal worms. The ten in the cages I fed wholly on either worms, or boiled eggs or meat. All of them lived *six months* in captivity; they were plump and fat, and were set at liberty in the spring. In the following summer, I took several young sparrows of various ages from their nests, killed them and examined their stomachs. *I never found anything in them but insects and worms*; and having, moreover, convinced myself concerning the condition of the sparrows in the spring, summer and fall, and that, in the summer and fall, their stomachs contained chiefly insects and very few grass seeds, hardly ever grain, I began to write in periodicals and to address the governments directly. As I had a great number of witnesses, all of whom were as much surprised at the unlooked for results of my experiments as myself, I had the good fortune of restoring the poor sparrows to their lost reputation, at least, in that province of the kingdom of Hanover in which I lived. The above mentioned law was abolished, and the sparrows remained unmolested.

My experiments were conclusive. There is but one way to refute them, i. e., to show by experiments that mine were wrong. But such experiments are connected with some trouble, and this trouble is not paid for in cash or good notes of hand. Not long ago I showed on what sea-shores asparagus does not grow, and where I found it wild. Since that time I received a new edition of *Lenz's Natural History*, 5 vols., a book which, if any, deserves a translation into the English. Its author asserts that asparagus grows wild in Germany, adding that it is found in sandy places. Supposing now, my statements are wrong or incomplete, nothing is necessary but to show, *on what sea-shores asparagus grows*. To resort to a chemical analysis in order to settle that question, is too curious an advice to be followed. Yet somebody gave it.

CHARLES SIEDHOF.

PREMIUMS AWARDED**AT THE FRAMINGHAM CATTLE SHOW IN SEPTEMBER.**

We have not been able to obtain the awards of the several committees till very recently. It is now so late that we publish the substance only, without giving the remarks in full made by them.

The Committee on Plowing with single ox teams award the first premium to Abner Haven, Jr., \$3.00; second premium to I. S. Wheeler, 2.00; third to J. Johnson, Jr., 1.00.

The committee remark that "they have felt some embarrassment in coming to an award on account of the use by the competitors of two kinds of plows—the double share and the single share, and they would respectfully recommend that the double shares be considered a separate class of plows, and premiums offered accordingly."

"Your committee beg leave to make honorable mention of the work performed by the *double team* of Wm. Buckminster, Esq., as being of the first class—and although he did not contend for a premium, your committee would have given him a gratuity had we been supplied with funds."

Note.—Premiums were offered for single teams only.

JOHN WENZELL, } Committee.
JAMES FENTON, }

The Committee on Drawing and Backing report that they award the first premium to Cyrus Woolson, \$3.00; second to Col. Wm. Hastings, 2.00; third to John Johnson, Jr., 1.00.

MOSES EGGLE, } Committee.
FRANCIS COOLIDGE, }
GEORGE BULLARD, }

The Committee on Plowing with Horse Teams award the first premium to Col. Wm. Hastings, \$3.00; second to Buckley Moore, 2.00; third to Harrison Eames, 1.00.

F. A. BILLINGS, } Committee.
H. R. DANIELS, }
P. B. DAVIS, }

The Committee on Bulls report that there was but one offered for premium—and they award the second premium of two dollars to Dana Warren.

JAMES BROWN, for the Committee.

The Committee on Heifers report first premium to Col. James Brown, \$2.00; second to Joel Edmands, 1.00; third to S. S. Lewis, 1.00.

Note.—Names of the Committee not sent to us.

The Committee on Steers report that but one pair was exhibited to them. This was a pair of twins, by a young lad, Sylvanus Phipps, the son of Joseph Phipps.

JOHN JOHNSON, } Committee.
OBEID WINTER, }
WILLARD HAVEN, }

The Committee on Calves award the first premium of \$2.00 to J. Johnson, Jr.; second to Col. James Brown, 1.00 for heifer calf; and third premium of 1.00 for heifer calf to Obed Winter.

BUCKLEY MOORE, Chairman.

The Committee on Horses award the first pre-

mium of \$3.00 to Franklin Mason; second of 2.00 to Gilbert Childs; third of 1.00 to John Clark.

In behalf the Committee, JOHN CLARK.

The Committee on Colts award to Josiah Gibbs first premium of \$2.00, for three year old colt. To Addison Belknap, the second premium \$2.00 for a two year old colt. To Josiah Gibbs the third premium for the best yearling colt, 1.00.

GILBERT J. CHILDS, } Committee.
J. G. BANISTER, }
NATHL. PULSIFER, }

The Committee on Spring Pigs award to Ezra Dyer, \$2.00; to Abner Haven, Jr., 1.00; to Abiel S. Lewis, 1.00.

JOSEPH FULLER, } Committee.
JOEL EDMANDS, }
ELIPH. HASTINGS, }

The Committee on Breeding Sows award the first premium of \$2.00 to A. S. Lewis, for his two Suffolk sows. Second to C. K. Woolson, \$1.00; and they recommend a gratuity to Dana Warren for three breeding pigs.

J. S. WHEELER, } Committee.
JOSEPH PHIPPS, }
DANIEL PARMENTER, }

The Committee on Cheese award to Capt. Adam Hemenway the premium of \$2.00.

DEXTER ESTY, } Committee.
HOLLIS HASTINGS, }

The Committee on Bread award the first premium to Mary E. Cloyes, 14 years old. Second to Miss Moore, daughter of Buckley Moore, 11 years of age. Third to Miss E. S. Phipps, 13 years old. Fourth to Miss Adeline Kilburn, 14 years old.

J. W. BROWN, } Committee.
C. C. ESTY, }
OTIS HASTINGS, }

The Committee on White and Brown Bread award the first premium of \$1.00 to Mary Sullivan. Second of 75 cents to Mrs. George Eames. Third of 50 cents to Miss Mary Hyde. Fourth of 25 cents to Mrs. Dana Bullard.

S. WHITNEY, } Committee.
S. O. DANIELS, }
NEWELL CLARK, }

The attention of the reader is called to the portrait of the beautiful animal in this number, and to the description of two or three of our popular breeds of cattle drawn with a free hand by Mr. AMBROSE STEVENS, of New York. Mr. Stevens has had great experience with stock and has given his opinions in that straightforward and unequivocal manner as to leave no doubt of them on the mind of the reader. We neither endorse or deny what he says, but leave each person to come to his own conclusions. A free, but kind, discussion of the merits of the various breeds of cattle must result in benefit to the farmer.

So far as our own experience goes, the best milkers in our stall, including richness and quantity, have been those where the "Short Horn" blood

was prevalent. For the yoke, we have never seen any cattle excel the Devons on the farm of Mr. FRENCH, at Braintree.

TO THE FRIENDS OF AGRICULTURE IN MASSACHUSETTS.

The undersigned, a committee appointed for the purpose by the Massachusetts State Board of Agriculture, beg leave respectfully to call your attention to Public Lectures as a means by which much information may be diffused and interest excited in the community on the subject of agriculture. Such lectures are, at the present time, one of the most powerful instrumentalities for the advancement of any branch of knowledge, or any measure of reform.

Numerous voluntary organizations existing in all parts of the Commonwealth under the name of Lyceums and similar associations, afford easy and available opportunities for presenting the subject of agriculture to the people under the form of popular lectures.

It is felt by those to whom the interests of agriculture in this State are now more particularly entrusted, that these opportunities ought to be improved, and that measures should be taken by those friendly to the object, to bring the subject before their respective Lyceums, and other like clubs or institutions, and thus secure lectures on Agriculture, Horticulture, Pomology, and kindred topics.

A majority of the people in nearly all the towns in this Commonwealth are directly interested in these subjects, and it is believed feel desirous of information in relation to them. It would seem, therefore, that some of the lectures annually given before these various popular societies should be on agriculture, in some of its various departments.

● The Committee are aware that it is now late in the year, and that arrangements for lectures for the season have already been generally made, yet they do not on that account feel it less their duty to call attention to the subject, in the hope, that although but few lecturers should be secured for the present winter, early and effective arrangements will be made for the next.

Should lectures of a practical character be wanted, applications may be addressed to the "Secretary of the State Board of Agriculture, Boston," with whom, at the request of the committee, the names of several gentlemen have been left, who will perform the service.

AMASA WALKER,
JOHN W. PROCTOR, } Committee.
EDWARD HITCHCOCK, }

Office of the State Board of Agriculture,
Boston, Dec. 8, 1852.

✍ Editors favorable to the above object are requested to copy.

MYSTERIOUS CONDUCT OF A DOG.

The editor of the *Green Mountain Freeman*, published at Montpelier, Vt., gives the following item of personal experience:

To the many remarkable anecdotes related of the dog, we have one to add from our own personal experience. When just starting in our profession, we slept for a short time alone in our office, much disliking to do so, because we were occasionally subject to severe fits of the incubus, or night-mare, from which we used to depend on others to arouse us. One day, our door was beset by a small, red, stranger dog, that seemed singularly intent on entering. We drove him away twice; but he as often returned and manifested the same earnest desire to come in. Being somewhat surprised at this, and knowing that no one who could be his master had been there that day, we at length opened the door, and by words and gestures invited him to come in. Joyfully availing himself of the liberty, he entered; and, without seeming to look round for any one, quietly lay down under the table, where he remained until bed-time; when we tried to make him go out. But he absolutely refused, and, being struck with the singularity of the animal's conduct throughout, we concluded to let him remain for the night, and after procuring some food for him, retired to our bed, which was in a small adjoining room, the entrance to which from the office, we always for the sake of better air, left open.

Some time during that night, we were visited by a frightful fit of the nightmare, from which, though perfectly conscious, we probably should never have come out without assistance. At our first groan, the dog bounded to our bedside, and commenced barking. Finding this did no good, he mounted the bed, and barked in our face. Failing in this, also, he stripped down the bed clothes, and fell to pawing our chest, more and more furiously, till he tore the skin, which instantly broke the horrid spell; and we arose with a feeling of gratitude for the interposition, as we could never help viewing it, more intense than any we remember to have ever experienced. We would have gladly always kept the dog, but the next morning, when we opened the door, he passed out, and, as if his mission was ended, trotted away, never to be seen by us again.

SOPS IN WINE.

This is the name of a delicate little apple which should be found in every garden; ripens gradually from the first of August to October. The skin is smooth, crimson in the shade, stained and striped with purplish crimson in the sun, and covered with a delicate bloom. Flesh white, with stains of a pinkish hue, firm, crisp, juicy, and of a pleasant sub-acid flavor. It is known under several names. *Sapsavine*, *Shropshire-vine*; by Knoop, *Rode Wyn Apple*; by Kenrick, *Sapson*, and by Ray in 1688, *Sops in Wine*.

In ancient times it appears to have been a custom for those who were betrothed to wear some flower as an external and conspicuous mark of their mutual engagement. Spenser, in his "Shepherd's Calendar," says:—

"Bring coronations and sops in wine
Worm of paramous."

Sops in wine, says Brand, were a species of flowers among the smaller kind of gilliflowers or pinks. How the name came to be applied to apples it is difficult to tell, but not any more so in this case than in that of numerous other varieties.

DURABILITY OF TIMBER.

The piles driven at the Woolwich Dock yards, thirty-seven years since, and prepared by the process of Mr. Kyan, are perfectly sound, while similar piles not so treated have required renewal twice during that time. This Kyanizing of tim-

ber is performed by immersing it for a time in a weak solution of corrosive sublimate. Could not the same advantages be availed of when setting posts for fences? Suppose the posts be entered in the ground butt-end up, and a small augur-hole of half an inch in depth in the upper end, in which might be placed a small quantity of corrosive sublimate, and then the hole plugged. Should any moisture be resident in the stick, (and no decay can occur without it,) would not the corrosive sublimate be slowly dissolved and carried through every pore of the wood, and if so, would it not add materially to the durability of the wood? We should like to see this tried, and would like to live long enough to report fully upon its effects.—*Working Farmer.*

CANKER-WORMS.



MALE.



FEMALE.



EGGS.



WORM.



PUPA.

Our old friend and correspondent, Dea. FOWLER, of Danvers, who is untiring in his attention to the cultivation, and the enemies, of fruits and fruit trees, has sent us a small bottle containing several grubs of the canker worm. He says, in a note, "I think it would be well to call the attention of your readers to the tarring of their trees at this time, as a great many grubs or female canker worms are now running."

In accordance with this timely hint we copy from the 2d vol. of the *Farmer*, page 401, some remarks made by Mr. FOWLER in that volume, and which we accompany by engravings of the male and female grubs, the worm, and the insect in its pupa state.

DEAR SIR:—I hardly know what to say in regard to the canker-worm. I am inclined to think the old mode of the application of tar around the body of the tree, on strips of cloth, canvass, or gunny-bags, six inches wide, and fastened around the trunk, is as good a mode to prevent the grub from ascending the tree, as any other that has yet been found. My mode has been to use tarred cloth; the tar, when thick, I made thin with oil. I stuff hay, cotton, or sea-weed between the tree and the lower edge of the cloth, to catch the drip of the tar; this serves likewise to tire, perplex, and perhaps entangle the grub, before it gets to the tar on the cloth. I think, if the tar is properly and seasonably applied in the spring, it will prove effectual. But some, on the contrary, think that tar must be applied in autumn, say the first of November. From a close observation of the canker-worm, I am inclined to think but few of the eggs deposited in the autumn are hatched in the spring; as only a few males ascend in the fall and winter, most of the eggs prove barren.

The cloth should be taken from the trees as soon as the grubs are done running, and the tar, should there be any, scraped from the trees.

Yours, S. P. FOWLER.

For the New England Farmer.

AGRICULTURE A CHEMICAL ART.

MR. EDITOR:—Dr. JUSTUS LIEBIG, in his work entitled "Organic Chemistry of Agriculture and Physiology," says—"Carbonic acid, ammonia and water, yield elements for all the organs of plants. The atmosphere and the soil offer the same kind of nourishment to the leaves and roots. The former contains a comparatively inexhaustible supply of carbonic acid and ammonia; the latter, by means of its *humus*, generates constantly fresh carbonic acid, while, during the winter, rain and snow introduce into the soil a quantity of ammonia sufficient for the development of the leaves and blossoms." The air by which the growing plant is surrounded, the soil which is the medium of its roots, the fluid by which its food is dissolved and rendered appropriable by those roots, the decomposable animal and vegetable matters which embody its aliment, and the entire vegetable organism itself—its roots, stalk, branches, leaves, buds, blossoms and fruit, together with its sap or circulating fluid, are chemical compounds. Of these, the common air is perhaps the most simple in its composition, yet in this we find a number of elements, viz: oxygen, nitrogen, hydrogen, carbonic acid, and ammonia, together with certain other principles which are perhaps incidental, but which, no doubt, have their appropriate sphere of action in the great circle of vegetable reproduction and life. All these are of a strictly chemical character, and are characterized by energies and affinities equally ample and sublime. To illustrate this remark, oxygen, or vital air, combines with nitro-

gen in fine proportions of relative weight or measure, besides forming a part of the atmosphere which is the prime sustainer of both animal and vegetable life. It also unites with hydrogen in two proportions—forming, in one instance, water, without which no vegetable can be produced, and with carbon, with which it forms two compounds—carbonic acid, a principle of vast utility in the nutrimental economy of plants, and without which no vegetable substance could be made to grow. Let us, for the sake of greater perspicuity, examine, chemically, the substance of that valuable and important fruit—the apple. We will take, for this purpose, the Tolman Sweeting:—

	Pulp.	Epidermis.
Percentage of water.....	84.75.....	61.20
Do. dry matter.....	15.25.....	38.80
Do. ash.....	0.26.....	0.72
Do. ash calcined on dry matter.....	1.705.....	1.856

Percentage of water and dry matter.

Percentage of water.....	81.52
Do. dry matter.....	18.48

Composition of the Ash.

	With Carbonic Acid.	Without Carbonic Acid.
Carbonic acid.....	17.62.....	
Silica.....	1.43.....	1.750
Phosphate of iron.....	1.82.....	2.227
Phosphoric acid.....	11.51.....	14.063
Lime.....	4.05.....	4.956
Magnesia.....	1.46.....	1.786
Potash.....	34.34.....	42.016
Soda.....	15.77.....	19.295
Chlorine.....	1.71.....	2.092
Sulphuric acid.....	5.44.....	6.656
Organic matter thrown down by nitrate of silver.....	4.20.....	5.139
	99.35	101.000

One more instance, that of hay, will suffice.

One hundred parts of hay, dried at 212°—116.2 parts dried in air, are found by analysis to contain

Carbon.....	45.8
Hydrogen.....	5.0
Oxygen.....	38.7
Nitrogen.....	1.5
Ashes.....	9.0

100.0
16.2 water.

The formation of manures is a chemical process, and the action of chemical laws is recognized in every department of husbandry, from the time the seed is buried in the soil, and its starch is transformed into saccharine matter—the primary indication of generative life, till the mature fruit falls, a completed result, perfect in all its developments and parts, to the ground. The history of this science is curious. It was once *Alchemy*, by the practice of which, its deluded professors attempted the attainment of unlimited powers of self-reward. It is traceable to the earlier physicians of Arabia, among whom it first took root, and who consumed their lives in the laborious but vain effort to “fix mercury” which they believed to contain the “germ of all curative influences,” and to be the “basis of all other metals.” They had recourse to many ingenious experiments to “catch the flying bird of Hermes,” and to discover the “Universal Elixir,” which was to confer upon the possessor the power of transmuting base metals into gold, of prolonging indefinitely, the period of human existence, and of investing mortals with the beauty and bloom of unfading youth. Such dreams, however, have long since been dispelled, and the science of chemistry turned to purposes of practical usefulness and utility.

H. D. W.

HAY—CUBIC FEET IN A TON.

I observe you allow 1,000 cubic feet for a ton of hay, by measure. In Vermont, our hay, according to bulk, may be more weighty. A good portion of it, either in stack or mow, 20 by 20 feet square, one foot thick, will weigh a ton; that is 400 cubic feet. Of our lighter meadow hay 500 feet are allowed for a ton. There is a wide difference in the weight and value of hay in different seasons. This year, the same quality and bulk is much heavier than last, and the increased intrinsic value in the same number of pounds in this year's production.

Our State will produce only about half a crop of hay this season. Grains look well, and the root crops of all kinds never looked better. Potatoes are uncommonly fine, and if free from rot, might be quite low in price. The farmers in the northern part of New York have also planted an unusual quantity of potatoes—from 10 to 100 acres in one field.—S. W. JEWETT, Middlebury, Vt.—*The Plow*.

PROGRESSION.

DAVID T. STEVENS, of Lewiston Falls, Maine, gives notice that he will visit “any or all the towns within the limits of their Agricultural Society, the ensuing winter, and lecture on the subject of Agriculture.” That's the true way, friend STEVENS, to arouse the masses to a sense of the importance of their vocation. We have urged this practice for years, but the *helpers* are still few.

Mr. Stevens recently read an Address before the West Lincoln Agricultural Society, which we have perused in the *Farmer and Mechanic*, published at Lewiston Falls, and which abounds in practical suggestions and forcible illustrations. Among the clergy may be found some of the best farmers and gardeners in the country; and in connection with their good examples on the soil, they are performing a noble work with the tongue and pen in their respective parishes, and through the agricultural journals.

PREJUDICE AGAINST FARMING.

[Extracted from W. H. Seward's address at Rutland.]

Nature has left all the human faculties in one sense incomplete, to be perfected by general education and by training for special and distinct pursuits. She has left those faculties not less incomplete and without more adaptation, in the farmer's case than in any other. Her laws are general, inflexible. Brutes only have perfect instincts. Man can be nothing, and indeed can do nothing at all, but by the guidance of cultivated reason. Notwithstanding admitted differences of natural capacity, and of tastes and inclinations, it is nevertheless practically and generally true that success, and even distinction and eminence, in any vocation, is proportioned to the measure of culture, training, industry and perseverance brought into exercise. So he will be the best farmer, and even the best woodsman or well-digger, as he will be the best lawyer, the greatest hero, and the greatest statesman, who shall have studied most widely and profoundly, and shall have labored most carefully and most assiduously.

There is another prejudice even more injurious

than that which I have thus exposed. The farmer's son is averse from the father's calling. He does not intend to pursue it, and is always looking for some gate by which to escape from it. The prejudice is hereditary in the farm-house. The farmer himself is not content with his occupation; nor is the farmer's wife any more so. They regard it as an humble, toilsome, and laborious one; they continually fret about its privations and hardships, and thus they unconsciously raise in their children a disgust towards it. Is not this frequently so? Is there a farmer here who does not desire, not to say seek, to procure for his son a cadet's or a midshipman's warrant, a desk in the village lawyer's office, a chair in the physician's study, or a place behind the counter in the country store, in preference to training him to the labors of the farm? I fear that there is scarcely a farmer's son who would not fly to accept such a position, or a farmer's daughter who would not prefer almost any settlement in town or city, to the domestic cares of the farm-house and the dairy.

Whence is this prejudice? It has come down to us from ages of barbarism. In the savage state, agricultural labor is despised, because bravery in battle and skill in the chase must be encouraged; and so heroism is still requisite for the public defence in the earlier stages of civilization, and the tiller of the soil, therefore, rises slowly from the condition of a villain, a serf, or a slave. Nevertheless, ancient, and almost universal as this prejudice is, I am sure that it is unnatural to mankind, in ripened civilization, such as that to which we have arrived. Of all classes of society we have the least need of hunters; and we employ very few soldiers, while the whole structure of society hinges on the Agricultural interest. A taste, nay a passion for Agriculture is inherent and universal among men. The soldier or the sailor cares little for learning, mechanics or music; but the solace of his weary watchings and his midnight dreams, are recollections of a cottage home. The merchant's anxieties and the lawyer's studies are prosecuted patiently for the ultimate end of graceful repose in a country seat; and lunatics, men and women, are won back to the sway of reason by the indulgence of labor in the harvest field, and the culture of fruits and flowers in the garden of the Asylum.

I know that frivolous persons, in what is called fashionable society, who sleep till noon, still continue to depreciate and despise rural pursuits and pleasures. But what are the opinions of such minds worth? They equally depreciate and despise all labor, all industry, all enterprise and all effort; and they reap their just reward in weariness of themselves, and in the contempt of those who value human talents, not by the depth in which they are buried but by the extent of their employment for the benefit of mankind.

The prejudice, however, must be expelled from the farmer's fireside; and the farmer and his wife must do this themselves. It is as true in this case as is the more practical one which the rustic poet had in view:—

"The wife too, must husband, as well as the man,
Or farewell, thy husbandry, do what thou can."

Let them remember that in well constituted and highly advanced society like yours, intellectual cultivation relieves men from labor, but it does

not at all exempt them from the practices of industry; and that notwithstanding the current use of the figures of speech, "wearied limbs, sweating brows, hardened sinews, and rough and blackened hands," there is no avocation in our country that rewards so liberally with health, wealth and honor a given application of well directed industry, as does that of the farmer. If he is surpassed by others in other pursuits, it is not because their avocations are preferable to his own, but because, while he has neglected education and training, they took care to secure both.

When these convictions shall have entered the farm-house, its respectability and dignity will be confessed. Its occupants will regard their dwellings and grounds not as irksome scenes of humiliating labor, but as their own permanent home, and the homestead of their children and their posterity. Affections unknown before, and new born emulations, will suggest motives to improvement, embellishment, refinement, with the introduction of useful and elegant studies and arts which will render the paternal roof, as it ought to be, attractive to the young, and the farmer's life harmonious with their tastes, and satisfactory to their ambition. Then the farmer's sons will desire and demand education as liberal as that now chiefly conferred on candidates for professional life, and will subject themselves to discipline, in acquiring the art of Agriculture, as rigorous as that endured by those who apprentice themselves to other vocations.

For the New England Farmer.

DISEASED PLUM TREES.

In reply to the inquiries of your correspondent "W. R. C.," I would say, there are various opinions in reference to this malady or disease of the plum tree. I am very well satisfied, from personal observation, that the circulation of the sap has nothing to do with forming the wart, so prevalent in many sections of the country. But a disease probably arising from an insect that works its passage into the very heart and pith of the twig, or branch affected. I observe that this insect ascends upwards, and in order to exterminate its ravages, the branch should be cut at least one foot below the wart, and as much farther as is found necessary, until you come to sound, healthy wood and pith, even if the whole tree goes in consequence. Then burn the cuttings. I am satisfied that if one tree is left to destruction, that the disease is as contagious to the remaining ones as the yellow to a peach orchard. I have many standard plum trees and many in nursery rows, all of which are in a sound, healthy condition; it has always been my practice to watch carefully this disease, and cut freely, sparing no imperfection of wood. I have seen plum trees not fifty rods apart, some clean and round and others literary covered with black warts; therefore no one will presume that *locality* has much to do with the disease. G. B. SLADE.

Somerset, Dec., 1852.

CORN SHELLER.—The Pennsylvania *Farm Journal*, published at Westchester, says a machine for shelling corn was presented at their late State Fair, that, worked by one horse, had shelled, and was warranted to shell 80 bushels of corn per hour!

VEGETABLE CUTTER.

When hay is selling at \$20 to \$25 the ton, it becomes the farmer to cast about him and see whether any unusual methods can be practiced to save fodder, or to feed out what he has with more economy. Plants feed more readily upon finely comminuted manures, as they impart their juices more readily, and in this form may be mingled more generally throughout the soil. So cattle receive the nutrient properties of their food with greater ease when divided into small particles by our agency. It then requires less mastication, imparts its properties quickly and leaves the creature opportunity for rumination and rest. Beside this, it is a matter of economy. Corn-stalks divided by the cutting machine and mixed with meal or shorts, will be mostly consumed by the cattle, and will impart considerable nourishment. But roots are more difficult to be eaten without being divided than the grasses or corn-stalks. Given whole, they are a perplexing, laborious and dangerous fodder. P₃

The above engraving represents a machine which will obviate all these difficulties and also prove economical.

The cutting wheel is made of cast iron, faced on one side, through which are inserted three knives like plane-irons. These cut the vegetables into thin slices with great rapidity, and then by cross-knives they are cut into strips of convenient form and size for cattle or sheep to eat, without danger of being choked. The pieces after being cut, lie loosely and anglingly together, and can easily be

taken up by the animal. The machine is capable of cutting so rapidly as to leave no objection to it on that account.

For the New England Farmer

GOOSEBERRIES.

I have cultivated the wild gooseberry for several years, and find that there are a great many varieties of them; some of which have thorns and others do not, and some have fine thorns and very thick, others have large, stout, sharp ones.

Some are good growers and bearers, while others are neither. I have two varieties that I think may be very valuable, one of which I found in this town; the bushes grow large and bear heavily, and almost entirely thornless. The other, I found on the farm occupied by Mr. Fabian, at the White Mountains. The fruit is large and sweet; the bushes have large thorns, bear abundantly, and are great growers. The bushes of this variety grow larger than I ever saw any other kind—I have seen them six feet high.

Yours, &c.,

B. F. CUTLER.

Pelham, N. H., Nov. 6, 1852.

AGRICULTURAL LECTURES.

The attention of the reader is particularly called to a circular in this paper from a committee recently appointed by the "Massachusetts State Board of Agriculture," on the subject of agricultural lectures. Although a large proportion of the population of our State is engaged in agricultural pursuits, we have no knowledge that half a dozen lectures upon the topics in which the farmer is most interested, are delivered in the course of a year. Why is it that this important class and in-

terest has been so long overlooked, leaving the ground to be occupied by a species of fungus literature, half imaginary and half infidel! It is high time there was a change in the matter and style of the lectures, now so frequent among the people, and we therefore thank the State Board of Agriculture for these timely suggestions in relation to this great interest of so large a portion of our citizens.

For the New England Farmer.

IMPORTANT TO THE FARMER.

MR. EDITOR:—Of all the plans yet proposed for the advancement of agricultural science among farmers, there has none yet been presented which to us seems so likely to effect the object as the one recently proposed by the State Board of Agriculture, of sending lecturers to address lyceums and farmers' clubs on the subject.

What the present circumstances of the case require, with regard to agricultural science, is, that farmers as a body should be led to see its importance, and the advantages which would result from its application. This, a few may learn from their own practice and observation; a few more may be led to appreciate it, from the facts they find laid down in agricultural publications. But the great mass of those whose chief employment is the cultivation of the soil, do not see, much less read, such publications, because they do not believe in them. What successful practice may have done for them, they will try again, and under like circumstances will probably meet with like success. Should circumstances, however, vary, either in the nature of the soil upon which they operate, or in the capricious fluctuations of the season, both which, to some extent, may be regulated by fixed laws of the farmer's own application, they become nonplussed, and are ready to denounce all observation as the chief of vanities. It is the want of practice and observation that becomes the precursor of failure, and the absence of scientific knowledge that leads men to declaim against it.

But let scientific lectures on agriculture be carried into the lyceum or club room, and you carry them within the reach of all—those who are already wise in their own estimation, and those who sit meekly seeking for wisdom. Let a stranger go to give these lectures and all will be sure to be there, to see how the man looks, what he has to say, and very possibly some will go to *confute all he says*.

No matter, they will all be there, and then is the time, and that is the place, to unfold the subject in all its attractions of thought-inspiring, pleasure-giving, profit-yielding influence. All may not, to be sure, derive equal benefit from these lectures, yet all will gain something—some very much. If the father does not feel particular interest, John or Tommy may get an idea that will sprout and grow wonderfully, and finally become a headful of ideas, flowing out and flying over the land. It may be that half a dozen Johns and Tommies will be there, and each and all, get inoculated with that love of science which only can be satisfied by constant draughts on her deep, pure fountains. If so, the commonwealth will soon have the solid capital (the capital of intellect) necessary to establish and sustain what her wisest and best sons

have long wished to see in successful operation,—*an agricultural school*. Produce the scholars, and such a school must, in the order of things, come into existence. Produce the *scholars*, such scholars as have capacity to learn, and a disposition to gratify that capacity, and the existence of such a school will be a healthful and growing one. Let one such class of scholars graduate and scatter to the north and the south, the east and the west, to the hill-top and the valley; and there let their knowledge flow out in living works of improvement, and such a school—more, many such schools would become permanent fixtures in the land.

And then, what a glorious land this of ours, which we now call "the glory of all lands," would be! A land where the plow-boy, instead of "whistling for want of thought," with eye beaming with intelligence and heart expanding under surrounding influences, would be *all thought*, all action. He would learn that the natural world has treasures even beyond his imagination, rich beyond his conception,—beauties that he never dreamed of, wonders that have never been explored, system and order and perfection the most lovely and sublime, all his own, scattering their treasures plentiful as dew-drops in his path, while he is laboring to cause the earth to give seed to the sower for future harvests, and bread for the eater when he fainteth.

We do not think it a visionary idea, in any way, to suppose that a few such lectures as the Board of Agriculture propose, sprinkled over the commonwealth, would be the means of starting one or more agricultural schools. We think it the surest method that can be adopted to bring such schools into speedy existence, for the very nature of such lectures would point to the advantages that such schools would afford, as truly and as fixedly as the needle points to the pole star. It is not until men see and feel the advantages which are likely to result from a specified enterprise, that they will embark in that enterprise. And such lectures must surely be the key which will open to the public mind the advantages of such institutions.

Another advantage would be, the tendency to re-model these lyceums and render them more interesting in their nature, and more important in character.

Many of them, as they now exist in our country towns, can hardly be said to be of any avail, from the fact that they are not managed in a way calculated to insure success. Debating is, to a great extent, the order of their exercises, and the topics introduced are enough to confound wise heads and strong minds. Yet on these subjects, mere school-boys will toil and tug, labor and contend, and one party is sure to come off conqueror—very likely on a subject with whose merits, he is, after all, as ignorant as he is of the physical structure of the most distant planet. It has hitherto been an objection to these institutions that the aspirants have reached too far, and grasped at too much, and hence, have failed of securing any thing substantial. If they will familiarize themselves with common topics, which every day present themselves for investigation, until the mind becomes familiar with them, they will increase in knowledge faster, and of course become more fit for more far off things and those requiring deeper research.

These lectures will have a tendency to turn the channel in the course of proceeding, and call the

mind in from its wanderings on the distant and unavailing, to the home-born and practical things, which, more than all others, demand the attention of men.

We see still other benefits arising from this course of sending forth lecturers on agricultural science, of which we name one more and close.

It is an old maxim, that like produces like, and upon this principle, we can see no objection to the belief that in every lyceum or club, to which the board shall send a lecturer, one, two, three, perhaps more, young men will set themselves to work in earnest to become lecturers in their turn, and thus a regular succession or course be given during the continuance of the meetings. Don't cringe, young man, at the idea, and say you *can't* do it. Others, whose capacities were not a whit superior to yours, have done it, and a young American farmer, especially a Yankee farmer, ought to blush if the idea crosses his mind that he cannot do what others, under no more favorable circumstances, have done. Young men! supposing you try. What if you do take some of the natural sciences (they all belong to the farmer) that you are not familiar with, and as you study, with nature for your teacher, bring the result of your researches and lay them before your fellows. Thus you may learn, and by learning, become a teacher, a lecturer. And your success may encourage others to adopt the same course—beneficial to themselves, encouraging and salutary to others. Young men! Again we say *try*. The leisure of winter, the beauties and availability of science, the culture of the intellect, the dignity of your nature, everything, all things invite to it. Try it, and in due time a success, cheering and honorable, will be sure to crown your labor.

W. B.

Elmwood, Dec. 20, 1852.

FIG RAISING IN MISSISSIPPI

Some of our Suffolk pigs have got out into Mississippi, and as they seem to have met with a kind reception and find themselves in *pretty tall feed*, the following letter, from a correspondent to whom we had sent several pigs, describing the manner in which they are turned to grass there, will amuse by the contrast which it affords between our mode of preparing the porkers and theirs.

On my way home I found the pigs, and must express my thanks for your prompt attentions; the sow is a treasure. I have bought many hogs, and have been feeding them, man and boy, some 30 to 35 years, and I never yet saw a hog which I think will suit this country like this. Two planting friends came here to-day to see them, and both of them think as I say. The boar is good enough, but not so fine in his points. I have now under my immediate care 11 young sows and a boar, nearly as old as the one you sent, and though good hogs, they don't look at all well now by the side of yours. Many of you ice-bound folks if at my hog-house, would be induced to envy even my hogs one thing—sweet potatoes. I am cooking about 20 bushels daily, and such potatoes as you buy by the pound. I have 72 hogs up fatting, fed with boiled meal, hasty pudding, with pumpkins, and with boiled potatoes and meal, food changed. I cook 3 bushels of meal at a time, and then about 10 bushels of potatoes, giving hogs a feed of raw

potatoes, and a little raw corn, merely to get them not to tire on cooked food. I think I will kill some 25 head which will run from 175 to 275—these being even larger than is always safe in this latitude. I have now growing as a pasture for hogs 10 acres in clover, oats and barley, intending to turn my brood sows and pigs thereon, say January, which I suppose will keep them until oats are ripe, about June 10. To-morrow I turn my young sows and hogs into a 10 acre potato patch, from which we are now digging. In the same field, I have about 15 acres of oats, up well, about 1 acre in clover, sown last December and now several inches high; this pasture will keep them near 2 months.

I suppose you know not our winter oat; we can thus have a pasture all year. I also sow barley, but rye will not do well. After trying it many years, even sowing down 20 to 50 or 70 acres in the fall, for pasture, I find I have to buy seed about every 3d year, as it seems to almost run out. My plan is, sow on cotton or corn land, without the plow, graze all winter and plow in, in the spring—reserving enough for seed. This spring I turned under over 80 acres. I had some 20 acres sown down with oats and barley mixed, for hog feed principally, and will continue until I have sown 110 acres—intending to plow all under next spring, except perhaps 20 acres.

I am, dear sir, yours with respect,

M. W. PHILLIPS.

For the New England Farmer.

FARM HOUSES.

MR. EDITOR:—Being about to build a farm house, I have concluded to build of strips, or timber, sawed 4 inches wide and 1½ inches thick, fastened together by nailing from one piece to another, and carrying up all the walls and partition together; the walls to be 1½ story high and plastering on the inside of the walls for a finish. I wish to inquire of you, or some of your subscribers, if the outside could be plastered or finished with concrete or hydraulic cement, and then painted and penciled in imitation of granite, so as to be durable. If so, how to be put on, whether to put on a coat of plaster first or not. Plastering on the outside of buildings is generally not durable; but I should think that concrete might be.

An answer to the above inquiry will be thankfully received by a subscriber.

E. CAMP.

Chelsea, Vt., Dec. 14, 1852.

REMARKS.—Some of our readers undoubtedly possess the required knowledge, and we hope will communicate it.

POTASH WATER.

The editor of the *Farmer and Planter*, published at Pendleton, S. C., in cautioning people to use all alkalies with great care when applied to fruit trees, says; "Two springs since we killed some young trees by applying too liberally a solution of one pound of pearlash and one pint of soft soap in three gallons of water. A very dry spell followed the application, and hence not being washed off, the caustic liquid turned the bark of several trees quite yellow, and much injured those that escaped."

For the New England Farmer.

STATE BOARD OF AGRICULTURE.

EDITOR OF THE N. E. FARMER:—Gentlemen—As your paper has noted with more distinctness, than any other, the action of the Massachusetts Board of Agriculture; and as the important question of selecting a permanent Secretary of the Board, remains to be considered; I beg leave to give you a few brief minutes of a conversation that I had with an intelligent friend to the cause as to the qualifications demanded in the office.

He remarked, that the person selected should have much knowledge of the details of a farmer's life, in order to secure the confidence and good will of the farmers themselves. He should be a scientific agriculturist, to some extent, at least, in order to raise and elevate the farming community; not by any parade of science, which would soon bring him into contempt; but by combining and speaking intelligently of the vast amount of facts, which would naturally come to his knowledge.

He should be easy and approachable in his manners. He ought to possess great facility, both in writing and speaking, to meet the demand of an extensive correspondence, and to respond to the numerous societies now coming into being, in which opportunities for doing good are constantly afforded. He ought to be able to act as a mediator to conciliate the prejudices which still exist to some extent, in the minds of the farmers in relation to their more wealthy neighbors; and in the minds of men of wealth, in relation to the operative farmers.

He should be willing to devote himself, body and mind, assiduously to the work; and divest himself entirely of all the *obnoxiousisms* of the day—either in politics or religion. The question is, where can such a man be found? If a young man is to be selected, he must have time for preparation, time to visit Europe,* and other States in our own country, before he enters upon the duties of the office. In the opinion of this gentleman, it would be more creditable to the State to select such a man and give him this privilege; than to attempt to mould one into form who has not now these qualifications; and is too far gone to acquire them. If these suggestions shall be deemed by you pertinent to the season of the New Year, they are at your service.

January 1, 1853.

*If I do not mistake, the late Prof. Norton of Yale College was selected and sent abroad for qualification. Several of the most eminent professors in our colleges have been thus chosen. Such is the state of society among us, and such are the limited means of most young men, that every one feels it an incumbent duty to prepare for some definite purpose. As this is a new object, it is not to be expected that men will be found ready made. To be sure, President Hitchcock was thought to be such a man. It is ever to be regretted, that he did not accept the office,—at least, until some one could be found, "worthy and well qualified."

TO ADVERTISERS.

It will be seen by a paragraph in another column that we have distributed, during the year 1852, more than six hundred thousand copies of the *New England Farmer*. This fact will show that as an advertising medium for farms, stock, implements, or any of the wants of the farmer or gardener, or for those seeking agricultural employment, it offers advantages unsurpassed by any other medium in the country. For terms see advertising columns.

SPLENDID FRUIT.

We have received from Mr. G. W. LAKE, of Topsfield, a box of the most perfectly shaped and beautiful *Northern Spy* apples that we ever saw. Mr. LAKE will please accept our hearty thanks for producing such valuable fruit. We also have before us a box of the same apples sent us from Rochester, N. Y. These specimens, one grown where the apple originated in western New York, and the other in the cold New England climate, will satisfy all, we think, that the Northern Spy may be successfully raised here. Mr. Lake's are larger, fairer, and much higher colored than the western apples.

The Northern Spy keeps better than the Baldwin, and its flavor is equally as good.

Will Mr. Lake inform us whether these apples grew from scions set in old trees, or from budded or grafted nursery trees, and what his opinion is as to its bearing properties, hardiness, &c.

For the New England Farmer.

CULTURE OF INDIAN CORN.

Often have we heard the remark made by experienced practical farmers, that they did not believe in the growing of one hundred bushels of sound Indian corn, upon an acre of land, when fairly measured. And sometimes we have been more than half inclined to give heed to these assertions in relation to our Massachusetts land. Because we have often grown corn on land of superior quality, highly manured, with best of care, and not raised so much as one hundred bushels to the acre. In fact, we do not remember to have seen this amount of crop, when fairly dried and measured. Our attention is called to this fact, by the extraordinary crops reported the present season from the county of Plymouth, where the land is not superior to that of other counties of the State. The supervisor reports the following crops:

Calvin Leavitt.....	122 10-85 bushels.
George Wood.....	102 10-85 "
Richard Sampson.....	96 40-85 "
Martin Leonard.....	94 70-85 "
Phallander Wood.....	92 80-85 "
William Wood.....	92 60-85 "

Here are six acres, averaging more than one hundred bushels each, "according to the measurement," if our computation is right. That the gentlemen, who viewed these crops, reported truly according to their knowledge, there is no reason to question;—but that they have the same rule of measurement, as is adopted in Suffolk, Middlesex and Essex, we should like to be fully advised. We have seen the fields of corn, when growing in Plymouth county, and thought they did not promise more than we have met elsewhere. But we are free to say, that we do not believe there is any other county in the commonwealth where six acres of corn will be found to have yielded over six hundred bushels the last season. If there be any variance in the rule of measurement; this is a fair subject to be examined and made uniform by the Board of Agriculture.

Dec. 13, 1852.

P.

THE HYDRAULIC RAM.

The hydraulic ram is a simple mechanical apparatus, constructed upon philosophical principles, and is used very effectively in raising a portion of the water from a spring or running brook above the level of its fountain head. The following description, it is believed, will be easily understood. Suppose a water pipe is laid along down the course of the stream through which the water is required to pass. The lower end of the pipe is closed, and near that extremity is an orifice on the upper side which is opened and closed on the inside by a puppet valve shaped something like an inverted barrel bung. There is also another similar orifice and valve opening outward from the main pipe, and into an air vessel. Now let both valves be closed. As there is then no means of escape for the water in the pipe leading from the spring, it is brought to a state of rest. The valve opening inward is loaded, so that its gravity is greater than the pressure of the water at rest in the pipe; it consequently falls into the pipe, leaving the orifice open, through which the water immediately begins to rush with increasing velocity, until its momentum becomes such as to push up the valve to its place in the orifice. The momentum of the water suddenly stopped in its course, is such as to lift up the other valve opening outward into the air vessel, through which the water rushes, compressing the air into a smaller compass, until the re-action of the air is in equilibrium with the action of the water, when the valve No. 2 falls back to its place and prevents the water in the air vessel going back again into the main pipe. The water in the main pipe then having no escape, is again brought to rest, whereupon valve No. 1 falls down again by its own weight, and the process is again repeated. From the air vessel a discharging pipe leads off to the upper story of a house, or any other place where the water is wanted, to which point it is driven by the elasticity of the compressed air in the vessel. Of course the amount of water raised, compared to the whole, will be in inverse ratio to the elevation of the discharging point above the fountain-head. The momentum of the blow forcing the water into the air vessel when the valve closes, was well illustrated at the time the fountain was first put in action on Boston Common, where, it will be recollected, the momentum of the water was so great at the sudden stoppage of the jet, as to burst the pipes and deluge the Common.—*Journal.*

For the New England Farmer.

WHITE CLOVER.

MR. EDITOR:—Will you have the goodness to state through your paper, your opinion of sowing white clover seed on our old pastures, where they are smooth and can be harrowed, in order to revive them after the severe drought of summer, or being killed by the severe cold of winter. What is the price of the above-named seed?

ZENAS H. UPHAM.

Windham, Vt., Dec. 14, 1852.

REMARKS.—Will our associate, Mr. HOLBROOK, reply to these inquiries? •

☞ Georgia flour, of superior quality, is becoming an article of merchandise in Charleston, S. C.

Ladies' Department.

THOUGHTS AND DOINGS OF A HOUSE-KEEPER.

BY FRANCES D. GAGE.

Hi! ho! hum! I suppose I must get up; if I don't Biddy won't get that wash-fire going in season. But O, what hard work it is now-a-days to get up. I am old and stiff. Well, well, I'm not so young as I was twenty years ago; but what of that? I hope my years have been years of service, and my elasticity has not gone for evil. How beautifully that robin sings upon the peach-tree; poor fellow! it is cold this morning, and the snow lies upon his perch; but his note is as gay and cheery as in the balmy spring morning of last week. The birds never grumble or make discordant notes, and they never fail to shake off their drowsy slumbers with the first beams of sunshine.

Thank thee, dear bird of mine, for thy melodious hint, that it is time to get up; so away with morning reveries.

Ha! ha! Ponto; always ahead of me; good fellow! And I stooped down and patted his coal-black head, and he frisked his joy around me as if we had been separated for a year, instead of only one night-watch. Down, Ponto, down! Let me tie my shoes and go to my work.

"Well, Biddy, have you got the wash-fire started in the back kitchen?"

"I have, ma'am."

"That's right. You did not get home last night!"

"No, ma'am; it was too dark intirely to be wandering up the brae, my love, and so I was saying that niver a bit you'd care if I tarried below, barring I was home in season in the morning for the work."

Ha, Biddy, that crimson glow upon thy young cheek tells strange tales. It was not the climbing the brae in the dark, all alone, that kept you down at Paddy Evan's. Some loving Dennis from thy own green isle, has tempted thee, and thy eyes are dim with the late night-watch, and the tremulous sigh breaks up from thy heart. Thou art human, Biddy, and it is human to love: and maids in the kitchen have hearts as softly impressible as maids in the parlors, and as pure, too, for aught I know. Biddy did not hear my thoughts.

"Boil the praties with the skins on, ma'am!"

"Certainly, child; I do not think they are ever so nice and sweet as when boiled with the skins on. Wash them nicely, and cut out carefully all the defective parts, and boil them in clear water; but be sure, Biddy, not to let them boil too long—turn off the water as soon as you can put a fork through them easily."

"And if the young gentlemen are not ready for them, then what'll I do?"

"Let them set in the kettle, on the top of the stove, with the lid tightly closed over them; it will not hurt them much to stand a few minutes."

The cherry-cheeked maiden went her way as if she had learned something new—and may be she had, for though the boiling of a potato seems to be a very simple thing, it's not half the girls, or women either, that take pains to do it right.

But I declare those boys are not up yet.

"Will!"

"Ma'am!"

"Come down! it's time you was up. Wake,

John, and Henry and George. Come, now; don't go to sleep again."

"We will!"

Pshaw! the fellow is so sleepy he does not know whether he is saying yes or no. I used to be just so myself, and I never go to the door to call my own children, but I think of my own dear mother that is gone. My mother!—how often I think of her! When I sweep, when I wash dishes, make bread—even when I turn over the slice of meat in the dish—I think of her and her gentle love, and patient teachings to her wayward child. I, too, must strive to be patient.

"Biddy, Biddy! it's time the meal was over. There, you may take hold of the washing now. I will get the breakfast on the table and attend to these little matters, and give you a helping hand, by-and-bye."

"And thanks to ye," answered the cherry-lip, "it's not often the likes of ye goes into the wash-tub."

Poor thing! she thinks that her fate is harder than mine, though I have two cares to her one—but how thankful I am that I know how to get up in the morning and get breakfast—know how to do it myself, and know when it is done right. It is a glorious thing to feel independent—to know that my happiness and comfort, and that of my husband and children, is not entirely in the power of a Biddy, and that if she refuses to butter the toast, or clear the coffee, I can do it myself, and thus save the murmuring and discontent of the household in spite of her. Only think of it, all ye who curl up your lip at the insignificance of a housekeeper. Insignificance indeed! Here are fifteen souls under this roof. Suppose Biddy had the washing all to do, and the breakfast to get, too. Biddy would be in a hurry—feel impatient—vexed, perhaps—that she alone was the busy one. The coffee would not be cleared, the pork badly cooked, the potatoes spoiled, &c. Then husband and sons are disappointed, out of humor; stomachs out of gear, and tempers in unison; and they go away to the workshop or office, speak harshly to neighbors, crusty to customers; grow nervous, spoil a job, get into a fret and come home to dinner in a fever; look coldly on wife, spurn the baby, and grieve all hearts, all because wife or daughter could not get up early and help Biddy get the breakfast. I'm glad the robin woke me; glad I know how to work.

"Why, girls, girls, you are up too late; bless you! you don't know how much you lose by indulging this last half-hour in bed. You must get up early if you would have a full measure of beauty—bright eyes and rosy cheeks. I was just thinking how happy getting up in good season and looking to family comforts, will make us all. Only think, Minnie, dear, how nice to have everything right when we all set down to our morning meal—coffee clear; not a biscuit too brown, steak in order, every plate, knife and fork in its place; smiling faces, grateful hearts, and pleasant mirth, not a complaint, not a murmur, and all go away with the consciousness, sitting like a singing bird among the fresh green leaves of family affection, warbling a sweet melody, that they are loved and cared for. O! if there is a thought that will make a man cheerful, kind, generous, and honest, it is to know that he has a tidy, careful, industrious wife and children at home. If such a man can be loved—

Minnie, take down the toasting fork, dear, and toast your pa a slice of bread—never mind the boys, they are young and can eat bread without toasting. Always think of your father, child; look to his comfort morning, noon and night, that the blessing of his old age may fall upon you. Nettie, love—Ah, ha!—here is my baby—'No!'—Yes you are, if six years have curled your little pate—come, kiss me now; pretty big to kiss, ain't you? There, let sister Nettie wash you while mamma takes up the breakfast. Tommy, get the chairs round the table—call the family."

Mechanics' Department, Arts, &c.

AN EXTRAORDINARY LAMP.—Among the list of patents is one taken out by Mr. E. Whele, for a candle lamp of very novel character. The lamp has a dial or clock face, and, as the candle burns, the hands mark the hours and minutes correctly, and a hammer strikes the time. As a chamber light for a sick room, it marks the time, and can be set to strike at any given periods, when the patient requires attention. As a night-light it marks the time on a transparent dial, and rings an alarm at any stated period, and in ten minutes afterwards extinguishes the candle, or will continue to strike every second until the party gets out of bed and stops it; and, if a very heavy sleeper requires to be roused, it will fire off a percussion cap. As a table lamp it marks the time and strikes the hours, and has a regulator and index, by which may be ascertained the amount of light and economy of consumption of the various makers. And all this is effected with very little machinery, which is of the most simple kind.—*Foreign paper.*

MARBLEIZED IRON.—The use of iron, in its application to building purposes, seems to be daily extending; its durability of ornament for architectural adornment, without much increasing the cost, recommends it above all other materials. A new application of it has just been made by the New York Marbleized Iron Works, in the manufacture of Marbleized Iron, which has all the beauty and variety of colors that marble itself exhibits. The iron appears to be enameled; and the choicest kinds of marble for Mantels, Columns and Table Tops are imitated so closely, that the ordinary eye cannot detect the difference. The great advantages of this article are its cheapness—it is produced at about one-third the cost of marble, and in various shapes and forms, according to the taste of the purchaser; its durability and capability of resisting a greater degree of heat. Neither acids nor oils affect it, in which respect it has a decided advantage over marble.

The beauty and utility of this manufactured article will make it a valuable and important substitute for marble.—*Boston Journal.*

☞ The caloric ship is to go into dock at New York this week, for coppering, and as soon as that job is finished, will make her engineer's trial trip. Her engines have driven her wheels all day at a speed of nearly 14 miles per hour.

☞ Every time you avoid doing that which is wrong, you increase your inclination to do that which is right.

Boy's Department.

WINTER SPORTS.

The summer is ended, the autumn is gone,
And winter, stern winter, is fast coming on—
We see him advancing, his step is not slow,
His cap and his mantle are covered with snow;
His locks and his beard are white with the frost,
And forth from his nostrils the flakes are tossed;
He storms, and he blusters, and makes us to quail,
And flee from his presence when in such a gale.
Yet the storm will blow over, go down with the sun,
And then comes the season for pleasure and fun.
Though his head is so hoary and visage so grim,
There's a smile on his lip, and his eye is not dim;
The boys they all greet him with frolicsome joy,
With a toss of the cap, and a "Welcome, old boy!
Our sleighs are all ready, our skates we will don,
And cut up our capers when the ice we are on."
And the lads and the lassies for sleigh-rides inclined,
With their hoods and mufflers and beaus to their mind,
They huddle together in an omnibus sleigh,
By the light of the moon they are riding away—
The merry bells ringing, while story and song,
With clear ringing laughter, come floating along.
The stars they look down from their home in the sky,
And winter, stern winter, just twinkles his eye.
We enter our dwelling—what comfort is here—
The coal burning brightly our spirits to cheer;
The table well spread, with plenty 'tis crowned,
And those that we love, they cluster around.
Our Father in Heaven, bless basket and store,
And give us a heart to remember the poor—
While we from thy bounty such blessings receive,
O, teach us to feel 'tis more blessed to give.

Poughkeepsie Telegraph.

THE YOUNG TRAVELLER.

Henry was travelling alone. He had left his parents and home in New York, and was on his way to "the far west." It was no small matter for a boy of fifteen to take such a journey, with no one to direct and advise him. But he carried with him as a sacred treasure, the counsels of his pious parents, and his religious principles. "When I paid my fare on the boat," he wrote to his mother, "the captain and I could not make the change; and we arranged it so that I owed him ten cents. In trying to get change, I went to a man who asked what I wanted with ten cents. I replied, 'To pay the captain a debt.' 'Pshaw!' said he, 'I wouldn't pay—never pay a debt, if you can help it. It's bad policy.' I told him I thought it right to be honest; and besides, I had no idea I should in the end be ten cents poorer for paying. I soon got the change and paid the captain."

"It turned out that ten cents paid saved me six dollars and sixty cents. When in Albany, about twenty minutes before the departure of the train for Buffalo, I recollected that though I paid to Buffalo, the captain of the boat had given me no ticket beyond Albany. I told the gentleman who gave me the change, and he accompanied me back to the boat. The captain having heard the circumstances, asked if I was the boy that paid him the ten cents. I replied, 'Yes.' 'Well,' said he, 'here is a ticket.' I saw that 'honesty is the best policy,' and felt the value of my father's counsels, and the great kindness of God in giving me such parents."—*American Messenger.*

Advertising Department.

☐ A limited number of advertisements of an appropriate character will be inserted in the monthly *Farmer* at the following

RATES.

For one square of 15 lines, one insertion.....\$1.00.
For each subsequent insertion.....,50

The above rates will be charged for all advertisements, whether longer or shorter.

Pure Black Spanish Fowls.



A few pairs choice Black Spanish Fowls, raised from stock imported this season. For sale by THOMAS THACHER, Jr., at the Fulton Iron Foundry, South Boston. Oct. 16, 1852. Sm's

AGRICULTURAL

WAREHOUSE AND SEED STORE,

QUINCY HALL, OVER THE MARKET, BOSTON.

THE Proprietors having recently enlarged their Warehouse, and increased their works at Worcester, would respectfully invite the attention of Planters and Dealers in AGRICULTURAL & HORTICULTURAL IMPLEMENTS, GARDEN and FIELD SEEDS, &c., to their stock, comprising the largest and best assortment to be found in the United States, which are offered at low prices.

OF PLOUGHS—we have the greatest variety of kinds and sizes.

Improved Rod Ploughs, for flat furrows—Improved Scotch Ploughs for lapped furrows—Improved Stubble Ploughs, which are especially adapted to deep tillage, or varying from 6 to 12 inches in depth.

Self-sharpening, Hill Side, Sub-soil, Double Mould, Corn, Cotton and Rice Ploughs.

Cylinder Hay Cutters, Smith's Patent Lever Gate, and other saw, Patent Corn Shellers, with and without Separators. Seed Sowers, of various sizes and prices. Batchelder's patent Corn Planter, improved. Fanning Mills of various sizes, Horse Powers, Threshing Machines, thermometer Churns, Robbins' patent Centrifugal Churn, Cylinder Churn, Dash Churn, Corn Planters, together with almost every article wanted on the Plantation, Farm or Garden.

Illustrated Catalogues sent gratis on application, post paid.

RUGGLES, NOURSE, MASON & CO.

Boston and Worcester, Mass., Jan. 1, 1853. tf

Choice Fowls.



The subscriber offers for sale a few pairs of each of the following breeds of Domestic Fowls, viz.: White and Buff Shanghaes, Gold and Silver Spangled Polands, Bolton Gray and Black Spanish; also, large Virginia Turkeys and Bremen Geese.

These fowls are all very fine, the spangled fowls beautiful.

H. H. LITTLE.
tf

East Marshfield, Oct. 30, 1852.

Garden Seeds.

WE respectfully solicit the attention of purchasers of GARDEN SEEDS to our extensive stock, which we offer for sale. We have all the sorts of Vegetable Seeds that have proved worthy of cultivation; also, Grain, Grass and Flower Seeds. All the varieties are raised and selected expressly for our trade, and we do with confidence recommend them to all who desire to procure seeds that will prove true to their names.

☐ Catalogues gratis, on application.

RUGGLES, NOURSE, MASON & CO.,

Jan. 1.

Over Quincy Market, Boston.

For Sale.



A few extra large and handsome Domestic Fowls for sale cheap if applied for soon.

EDWARD ABORN,
No. 30 South Water Street,
Providence, R. I.

Dec. 27, 1852.

Bound Volumes.

BACK VOLUMES of the NEW ENGLAND FARMER, elegantly bound in Muslin, Gilt and Embossed, are now for sale at this office.
Boston, March 29

The Farmers' Library.

JUST RECEIVED, the following assortment of Agricultural and Horticultural Books, embracing the standard works of eminent American and European writers, on the Farm, the Orchard, the Garden, &c. &c.

	PRICE.
American Farm Book, by Allen,	\$1.00
Farmer's Treasure, by Faulkner and Smith,	.75
Dana's Muck Manual,	1.00
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about one year old.
Jan. 1, 1853.

Wanted, a thorough bred Ayrshire Bull, and Heifer, not exceeding two years old. Any person having such for sale, or very likely Calves, will please apply to the subscriber at this office.

Also wanted, a fine native Bull,
JOHN RAYNOLDS.

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IMPROVED YANKEE CORN SHELLERS, with and without separators. These machines are adapted to large and small varieties of corn, will shell rapidly and not liable to get out of order. For sale, wholesale and retail, over the market, by
RUGGLES, NOURSE, MASON & CO.
Nov. 27, 1852.

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The subscriber respectfully invites his friends and customers to his large collection of FRUIT TREES, embracing all the choicest varieties worth cultivation,—consisting of Apple, Pear, Peach, Plum, Cherry and Quince, from three to five years from the bud—thrifty and handsome.

Also, about 200 extra size Pear trees, 8 to 10 years from the bud, all in a bearing state, on pear bottoms.

Also, about 1500 Pear trees, on pear bottoms, from 3 to 4 years from the bud, very thrifty and of the choicest varieties.

Also, Mountain Ash, Weeping Willows, Arbor Vitæ, Fir Balsam, &c.

Scions cut to order, from 1500 standard Apple and Pear trees, many of which are in a full bearing state, and fruited 130 varieties last year,—and delivered free of charge at any of the Depots in Salem or Boston.

W. G. LAKE.

Topsfield, Jan. 1, 1853.

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The subscribers would respectfully inform their friends and the public, that they have on hand an unusually large stock of Apple, Pear, Plum, Cherry, Peach, and other Trees.

Also, Quinces, Currants, Raspberries, Grapes, &c., &c.

Ornamental Trees, and Shrubs, Backthorn Plants, &c. &c. Lot of Seedling Horse Chestnut, two years old.

Lot of European Bycamore, two years old. Good plants of the new and improved high bush Blackberry, the fruit of which is of enormous size.

Fine Apple Trees, three to five years' growth from bud, seven to nine feet high, \$35 per hundred.

We devote ourselves solely to the raising of trees; they receive our strict personal attention; we are therefore able to warrant every article true to name.

Those who intend purchasing large quantities of Apple Trees are respectfully invited to call before purchasing, and examine our stock, as it is large, and doubtless unsurpassed by any in the vicinity.

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JAMES HYDE & SON.

Newton Centre, Mass., Oct. 23, 1852.

6w*2

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The subscriber offers for sale a few pairs of these favorite fowls, which may be had by applying, post-paid, to him at Dorchester, Mass.

GEORGE DORR.

Jan. 1, 1853.

4w

United States & Foreign Patent Agency.

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THE undersigned, late Principal Examiner in the United States Patent Office, at Washington, D. C., offers his services to those about making application for Patents, with the hope that his long official connection with that Office, and his familiarity with its rules and practice, will enable him to give satisfaction to those who may employ him.

Those unacquainted with him are referred to the following testimonials from his late colleagues.

SAMUEL COOPER.

The undersigned, Principal and Assistant Examiners in the United States Patent Office, have for several years been well acquainted with Mr. Samuel Cooper, lately a Principal Examiner in this Office, and take pleasure in stating that he is a gentleman of the highest moral character, of unquestioned knowledge in the business and practice of the office, and that his scientific attainments are such as eminently fit him for the business in which he is about to engage.

HENRY B. BENWICK, } Principal
L. D. GALE, } Examiners.

J. H. LANE, }
T. R. FEALE, } Assistant
THOMAS T. EVERETT, } Examiners.
F. SOUTHGATE SMITH, }
WM. CHAUNCEY LANGDON, }

Boston, Oct. 2, 1852.

3m*

Buckthorn.

10,000 BUCKTHORN, for sale by
JAMES HYDE & SON.
Oct. 23, 1852.

4w**

THE FARMER'S

1853		ALMANAC.												1853	
Mo.	Day	Mo.	Day	Mo.	Day	Mo.	Day	Mo.	Day	Mo.	Day	Mo.	Day	Mo.	Day
JAN.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
FEB.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
MARCH.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
APRIL.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
MAY.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
JUNE.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
JULY.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
AUGUST.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
SEPT.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
OCT.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
NOV.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
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NEW ENGLAND FARMER

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SIMON BROWN, Editor.

FREDERICK HOLBROOK, } Associate
HENRY F. FRENCH, } Editors.

Terms, \$1.00 per annum in advance.

All subscriptions to commence with the volume, Jan. 1. The Farmer, is devoted exclusively to Agriculture, Horticulture, and their kindred Arts and Sciences; making a most volume of 578 octavo pages, embellished with numerous engravings. It may be elegantly bound in muslin, embossed and gilt, at 25 cts. a volume, if left at the office of publication.

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NEW ENGLAND FARMER, (WEEKLY,)

An Independent Agricultural Family Newspaper.

The News and Miscellaneous departments under the charge of WILLIAM SIMONDS, will include a full and careful report of the news of the Markets, and the news of the week, such as Domestic, Foreign and Marine Intelligence, Congressional and Legislative proceedings, Temperance and Religious Intelligence, and a general variety of Literary and Miscellaneous matter, adapted to family reading, containing more useful and valuable reading matter than any other Agricultural Newspaper published in New England. Everything of a hurtful or even doubtful tendency will be carefully excluded from its columns.

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QUINCY HALL, SOUTH MARKET STREET, BOSTON.

POSTAGE.—The postage on the New England Farmer, monthly, is 14 cents per quarter, or 6 cents per year, to any part of the United States, to be paid in advance at the office where the same is received.

Interesting to Farmers.

THE subscriber has been induced at the request of several of his friends in the farming interest to enter into the manufacture of SHELL LIME, for farming purposes, and is now prepared to deliver at any of the railroads in Boston or Charlestown, the article in lots of from 10 to 100 barrels at the low price of 25 cts. per barrel, or if taken at the kiln at Medford Street, Charlestown, at 30 cents.

Also, for sale, 100 barrels of Thomaston Lime, in lots to suit purchasers.

Application may be made at No. 79 State Street, Boston, or at the Kiln, situated on Gould's Wharf, (so called) Charlestown.

JAMES COLLIER, Agent.

DIRECTIONS FOR USING.

Place a layer of meadow mud of from 10 to 15 inches, then put on lime from 2 to 3 inches. Dissolve the salt in water, throw the liquid on to slack the lime, then another layer of mud, or peat, and so on alternately until the heap is from 4 to 5 feet in height. Proportion, 4 barrels of lime and one bushel of salt to the cord of mud, the salt mixed with the lime forms the muriate, and this mixture forms the valuable compound; this by decomposing the humid acid which is contained more or less in all meadow land, forms the muriate of lime—one of the most soluble substances, and if mixed with other valuable manures, prevents the escape and fixes the ammonia, which if mixed with lime alone would evaporate and render it valueless.

The shell lime made into mortar, with three barrels of sand to each barrel of lime, will make a cement of better quality than the best of Thomaston lime, for solar walls or stone work of any kind.

Nov. 6, 1852.

3m

Pure Suffolk Pigs.



The subscriber has now on hand pure blooded Suffolk Pigs for sale. Purchasers ordering them from a distance for breeding, may rely on getting the best patterns of the breed, carefully selected from the best sires.

J. L. LOVERING.

Quebec, Vt., May 29, 1852.

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DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. V.

BOSTON, FEBRUARY, 1853.

NO. 2.

RAYNOLDS & NOURSE, PROPRIETORS.
OFFICE...QUINCY HALL.

SIMON BROWN, EDITOR.

FRED'K HOLBROOK } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

CALENDAR FOR FEBRUARY.

The Saxons called February *Sprout-kele*, because in this month kele-wurte began to throw out whole-some young sprouts, which were the chief winter-wurte for the sustenance of the husbandman in those days. The "kele" being the well-known kale of the cabbage tribe. The Saxons also called this month "Solmonath," which means "*pan-cake month*," because in the course of it, cakes were offered by the pagan Saxons to the sun; and "Sol," or "soul," signified *food* or *cakes*.

Well, there is some difference between to-day, and the times when those old sun-worshippers lived. They would be horrified to see us *eat the cakes* which they offered perhaps as a propitiatory sacrifice, and then jump up and light our pipes by the sun! Notwithstanding, we think *eating the cakes* a more rational use of them than sacrificing them to old Sol, who looks as though he had not only a plenty of good cakes, but roast beef too. We hope, therefore, our people will eat their cakes themselves, and grow lusty upon them, maugre the Saxons, and their sun-worship.

Striking changes have taken place in the business of the country, and have broken up some of the pleasant old customs of the rural districts, and which are mourned over as "haleyon days and scenes never to return." Clare, in his *Shepherd's Calendar*, written many years ago, describes the gatherings of farmers in old England much as the farmers still collect in many places in this country. He says:—

"Now musing o'er the changing scene,
Farmers behind the tavern-screen
Collect;—with elbow idly press'd
On hob, reclines the corner's guest,
Reading the news, to mark again
The rise of beef, or price of grain.
Puffing the while his red-tipt pipe,
Or telling stories, over ripe,
Yet, winter's leisure to regale,
Hopes better times, and slips his ale."

Once, the country roads, all through New England, were jubilant with merry bells and voices through the winter months. Then the moun-

tains and vales poured forth their hardy sons, seeking distant markets for the products of their summer's toil. Lines of box sleighs filled with beef, pork, mutton and venison, cheese, butter, and honey, were impelled by fleet and powerful horses, skimming the plains and threading the valleys and presenting a most animating scene. There were taverns in those days; and in the cheerful light of their log-fires, after night had set in, gathered the hardy sons of the mountains. Here they fortified the "corporeal man" from their boxes of cold roast fowl, apple-pies and doughnuts, and while the storm blew furious without, they grew warm with sympathy, and with the log fire within.

And now this scene reminds some one of a benighted traveller, who lost his way in the mountains, and, but for his faithful dog, had perished in these lonely regions. He tells the tale,—and then each, in turn, relates his story of some perilous adventure amid the snowy mountains in the winter. And there was "flip" and "sling," in those days, and these went round sometimes, with the "merry tale," until the travellers were "unco' glorious." But as their pitchers grew light and the flame decreased, their eyes grew dull, and one after another their heavy tread might be heard approaching the bed.

"Where mortals the sweets of forgetfulness prove."

All this was a part of their Farm Work for February.

Now how changed the scene! Through yonder valley comes a strange looking monster, emitting smoke and flame, plunging into drifts and scattering them like chaff from its path, and bearing along to market, in its capacious storehouse, the products of an hundred farms! It comes at all times, and seasons—laughs at the elements, and makes night hideous with its unearthly screams, its gleaming eyes and fretful jar.

And this is the way the *locomotive* does this part of the Farm Work for February in 1853!

But there are other things which the locomotive cannot do. A part of the farm-work of this month, is, to read a great deal from the best books which treat of your particular business. There are plenty of books, two dozen of which would be sufficient for a whole town. Among them are Davy's Agricultural Chemistry; The Muck Book; Rural Economy; Bridgman's Young Gardener's Assistant; Fessenden's Complete Gardener and Farmer; Nash's Progressive Farmer; Buel's Farmer's Companion; all Downing's works; Harris's Work on Insects Injurious to Vegetation, and others, which you will find referred to on reading these. It is as important for the farmer to read these and other books of similar character, if he means to understand his profession, as for the lawyer to read Coke upon Littleton, or Blackstone. This reading is an indispensable part of his farm employment, or amusement, and will help to increase his crops as he understands the principles of growth in the plants he is rearing.

Then another important duty to be attended to in February, is, to see that your children are reaping the largest possible benefit from their attendance at school. Feel interested yourselves in the studies they are pursuing; converse with them often, and impress on their minds the importance of close application and studious habits, while young. They will catch vigor from your kind inquiries, and climb the "Hill of Science," pleasantly in your company.

When these duties are well discharged, a *new pleasure* will be found in looking after the stock and poultry, in sledding the fuel and timber, in preparing the farm implements, the plow, harrow, yokes, carts, hay-wagons, rakes, scythes, &c. Then the fencing materials must be collected for the hill or river-lot, the posts morticed and rails split, or stones drawn when the snow is thin. Save every moment from spring labor by drawing out as much manure as possible before the ground is soft, and other cares press upon you.

What results have you arrived at in your experiment of cutting fodder for 'your stock? Has not your bay of hay reminded you of the widow's cruse and meal barrel, by holding out beyond any former time? Make your experiments as exact as possible and keep accurate accounts, so that your neighbors may have the benefit of them.

Bear in mind that scions must be cut before the sap moves, and when cut, place them in a damp, cool place, so that they shall not shrivel.

If you have trees that *actually need* trimming, do that, too, before the sap moves. Use sharp tools and leave every wound smooth and in a workman-like manner.

Are your accounts all settled for 1852? Unsettled accounts are not pleasant subjects for meditation in the beautiful fields!

The time draws nigh when *spring work* will de-

mand all your attention; so let us be up and doing, and ready for "old Sol" by the time he has warmed the soil sufficiently to receive the seed.

For the New England Farmer.

THE RICHNESS OF LAND

PROPORTIONED TO THE QUANTITY OF STOCK KEPT.

MR. EDITOR:—Whatever may be said of the importance of guano, bone-dust, poudrette and other natural and artificial fertilizers of soils, it cannot be doubted that, with respect to the great majority of farmers, they must depend, principally if not entirely, on the manures they make upon their own farms. Purchased manures of all kinds are always expensive, and will rarely be obtained to any considerable extent. It behoves the farmer, then, to manufacture all the manure he possibly can, in his own various laboratories. He must keep his cattle and swine constantly at work, and by supplying them with the requisite materials, he may always make them *self-sustaining* animals, by the quantities of manure they will create. And as one important means of enriching his farm, he should keep as much stock as he can and keep them well, for the law of progress in the case is, that *keeping all he can* will give him the means of *keeping more*. By observing this law, his means accumulate, and his ability to keep more is continually increasing. It is on this principle that some farmers, in the lapse of a single decade of years, convert a desert into a garden, and on the most sterile soil rear up around them a luxuriant vegetation, and a richness of scenery which "Shenstone might have envied." While writing these lines, and in strong corroboration of the doctrine here laid down, the following paragraph in a European work fell under my notice, and quoting it endeth this chapter.

"The real source of the great fertility of the great Lombardian plain is now known to be its high cultivation. In the triangle included between Milan, Lodi and Pavia, each side of which is little more than twenty miles in length, there are, it is estimated, not fewer than 100,000 head of cattle, 100,000 pigs, and 25,000 horses, in addition to the human population. It is to the immense supplies of manure, solid and liquid, obtained from these sources, and not to the refuse of the towns themselves, that the richness of the soil is mainly attributable." D. C.

Waltham, Jan. 21, 1853.

For the New England Farmer.

MUCK—THORN AND QUINCE STOCK.

MESSRS. EDITORS:—I intend in the spring to set an orchard of early peach and other choice early fruit trees,—my land is a hill of moderate elevation, the soil is rather better than the term "sandy or gravelly knoll" would imply. I have plenty of peat or muck, but not enough that has been exposed a sufficient length of time to the atmosphere. I should like to be advised through your valuable paper, or otherwise, as soon as convenient, what I had better mix with nearly green muck to make it suitable to apply to such land, and for such purposes. (a.)

Is the thorn as good as the quince to graft the pear into? We have plenty of them around us growing wild and thrifty.

Any advice or remarks in regard to the above, would be very gratifying to me, and I doubt not it would to many others. Yours,

PAINTER, TURNED FARMER.

Milford, Jan. 17, 1853.

REMARKS.—See article in another column on "Composting with Muck."

(a.) If you must use "green muck," mix with lime. In another heap, try unleached ashes. If you can procure tanner's scrapings, try a heap with those. But next August throw out a heap of the mud that shall give you fifty cords in advance, and keep it good from year to year.

Will some person who has had experience, answer the question asked above, whether the thorn is as good as the quince to graft the pear into!

LEGISLATIVE AGRICULTURAL MEETINGS.

FIRST MEETING—TUESDAY EVENING, JAN. 18, 1853.

In accordance with the custom for several years past, those members of our Legislature and others interested in agricultural matters, assembled in the Representatives' Hall, at the State House, on Tuesday evening, for the purpose of forming themselves into an Agricultural Society.

The meeting was called to order by AMASA WALKER, of North Brookfield, and H. H. COOK, of Berkshire, appointed temporary chairman, and W. W. HILL, of Boston, Secretary *pro tem*.

Upon taking the chair, Mr. Cook announced the meeting as open for business.

At the suggestion of Mr. BROWN, of the *N. E. Farmer*, the full organization of the society was postponed until the next meeting, and the time devoted to an informal discussion. This course was adopted on account of the absence of the Secretary of last year, with the records; and many gentlemen who have heretofore taken part in the meetings, which rendered a permanent organization inconvenient.

Mr. BROWN suggested as a topic for discussion, a resolution setting forth the importance of the agricultural interest in this Commonwealth, and the need of a greater diffusion of agricultural knowledge among the people.

He then went on to remark that in mechanical and manufacturing pursuits we find those interested combining for the purpose of mutual benefit. If their business becomes depressed, or meets with new developments, they immediately come together to consult on the causes of the fluctuation and changes in their callings, and take such measures as wisdom dictates. Not so with the farmer. He has overlooked the advantages of this combination and has relied solely on his individual knowledge and intelligence.

If a man is to follow the sea, the law, or the ministry, he should and does prepare himself by a

course of study for the profession in life which he has chosen. But is it so with the farmer? He reads but few of the numerous agricultural books which exist in our libraries, acquires little scientific knowledge, and consequently makes but little progress in his calling,—falling into all the errors of those who have preceded him, and striking out but few new improvements.

Mr. WALKER concurred in the resolution offered by Mr. BROWN. Agriculture is a very important interest in the Commonwealth, and much more so than is often supposed. Not only the farmers proper, but many mechanics own and cultivate tracts of land, and derive much of their income from this source. This fact calls for the dissemination of agricultural knowledge, and this knowledge must be carried to the people by means of agricultural associations.

It may be asked why we need more information than our forefathers? There are three stages in agriculture. The first is when the land is first cleared—then it is rich and fertile, and requires no artificial manuring. The second stage is that in which the soil becomes partially exhausted, and the farmer has to put into his land the manure which his own resources furnish him, and this suffices for a time. The next and last stage is when he is obliged to raise larger crops than his ordinary manure will enable him to do. We have reached this stage. Now, the question comes up, how is the farmer to increase his amount of manure? In order to answer this question, science must be consulted. Science must inform us what ingredients are necessary to replenish the soil, and enable us to produce the desired crops. The speaker had himself experienced this want of information, and had sought the aid of scientific men with success.

He believed that nine-tenths of the farmers in the State were devoid of this important information. What we want to know is, what we can do to bring back to productiveness our worn out lands.

Mr. WELD, of Topsfield, believed that we must call science to the aid of agriculture. He wanted clearer knowledge as to the manner and extent of applying artificial manures. What proportion would be profitable? He had applied 100 bushels of ashes to the acre in moist, upland soil, and thought that amount necessary. He wanted scientific men to conduct experiments, and then make full, complete and honest statements in regard to the *modus operandi*.

Mr. SMITH, of Hampshire, related some facts in support of the views of Mr. W.

Mr. WALKER, of Worcester, said that one great obstacle to the attainment of the object set forth this evening, was the diversity of circumstances appertaining to evils. Experiments that prove entirely successful in one part of the country, completely fail in another. There is no certainty

about it. He did not know how he could get that amount of information diffused throughout the country which is necessary to make a man a successful farmer. He believed that every farmer must be his own scientific experimenter. Hardly any two agree in their systems, showing that what one man finds to his advantage may prove unprofitable to another. Every man must study the science of agriculture himself. No general principle can be laid down. What we want to know is how to make farming profitable. If a man has a farm which he can carry on with his own hands alone, he will make little money; but let him take a farm which requires extra help, and his profits will increase, for he will make a profit on his hired labor. We need enterprise more than we do manure.

Mr. Howe, of Southboro', inquired, if in getting a profit on the labor of those he employs, he did not prevent them from ever getting farms for themselves? He did not like that kind of enterprise which keeps other people down.

The gentleman then went on to say that he had employed ashes on a side hill of moist soil, and saw a great improvement in consequence; and then he applied it to another lot of similar soil and received no benefit whatever. Again, he had a lot of twelve acres, on six of which he had applied plaster to great advantage. He then applied it to the other six and received no benefit whatever.

Mr. WALKER, of Worcester, said in reply to Mr. Howe's question in regard to profit on hired labor, that there were a great number of laborers coming into this country who were without the means and incompetent to carry on farming, and were glad to obtain any kind of employment. He saw no harm in making use of this labor in the way he had intimated.

Mr. AMASA WALKER believed that this failure of experiment might be easily explained. Perhaps the manures applied were of poor quality, or the season unfavorable to its use. He had once applied plaster to a piece of land, but the first year he could perceive no benefit from it, and came to the conclusion that it needed to be applied the second year. He did so, yet he could hardly perceive its effects. He could only discover a small, white clover springing up. He continued the application, and was satisfied that it paid well. This, he thought an illustration of the need of more accurate scientific information.

Mr. ROWLEY, of Egremont, said, he also felt the need of more specific, practical knowledge in regard to the production of crops, and the proper management of the land. He did not know but that the farmers of the State needed enterprise, but he did not believe that it was the number of acres that he cultivated, that made a man rich. The old saying is, "a little farm well tilled." He thought there was a lack of system. Our farmers

do not, like the merchants, keep an account of the expense of raising their various crops, and thus be enabled to ascertain which were the most profitable. He thought farmers should take more pains to interchange views with one another, in regard to their interests. Perhaps one obstacle in the way of improvement is a prejudice against book farming.

For the New England Farmer.

CELERY.

BY W. CLIFT.

MR. EDITOR:—A correspondent in your December number inquires for the best method of securing celery for the winter. As I have cultivated this plant for the last six years, with very good success, I can give you the results of my experience. It requires more attention than most other vegetables, and the growing of good celery is a much more difficult matter than its preservation. This is the chief difficulty about it, to attend to its wants often, and seasonably.

If you wish early celery you must sow your seed in March in a hot-bed, and put your plants in the trench in June or early in July. If you only care for it late, sow in May in the open ground. Select a moist rich spot for your seed bed, thoroughly prepared. The finer the tilth of the mould the better your seed will germinate. An old mat thrown over the bed, or any light covering of grass or weeds, will aid the sprouting. This covering should be removed, as soon as the plants are well up. As soon as the plants are an inch high, they should be pricked out in a bed of rich mould thoroughly prepared. A compost of muck and night soil, or muck and hen dung, is a very good manure for the bed. The plants should be set in drills, six inches apart, and four inches in the drill. You cannot have good strong plants without pricking out. They should be kept free from weeds, and the soil should be stirred once a week until August.

The selection of a suitable spot for the trenches is a matter of considerable importance. As celery needs a good deal of water, select a spot as near the watering place as possible. Your soil should be two feet deep, and if there is not that depth of black loam you must prepare it in the trenches, for the occasion; you may prepare your trenches for growing two or four rows, as suits your convenience. If for two rows, the trenches should be 18 inches wide, and 18 deep. I have tried various kinds of manure, feathers, hair, night soil, &c. I have obtained the best results from night soil well mixed with loam of charcoal dust—but I attributed this to the fact that it was used in larger quantities, than to any superiority in the manure. The hogs' hair, though used in small quantities, gave very satisfactory results. But almost any manure will do, if it be thoroughly incorporated with the soil, in the bottom of the trenches. If you use stable dung the trenches should be half filled with it, and thoroughly worked into the soil with a fork.

Junius Smith, in the Patent Office Report, for 1845, gives the following directions for setting out the plants in the trench. "The plants should be trimmed about the crown, just at the top of the root; all the young suckers taken off, leaving the plant trim and neat, with all its main stalks. With

a dibble, which should be as large as the handle of a spade, as the roots will now be of considerable size, begin at one end of the trench, with your face toward the other, and set in a single row of plants in the middle of the trench, and not less than six inches asunder; water them well. No teetotaler loves water better than celery. It cannot have too much. The roots of this plant require more room than is generally allowed them, as any one may see when they are taken up for the table.

"Earthing up the plants should be delayed until they have attained a good size; and then it requires care, especially the first time. I always get into the trench myself, and, holding the plant with all its stalks firmly in my left hand, with a short-handled small hoe, draw the earth up around the plant without allowing it to come in between the stalks. When this is done, and the plants thus protected, you may, with a spade, strike off the edges of the trench, and partially fill it. As the plant grows, continue to earth up, and by the 1st of Nov. the plants will be two feet above the level of the earth, and of the size of a man's arm.

"Sometimes, particularly if the season be dry, celery is liable to be attacked by a fly. In that case, you will see the tops of the celery turn brown and wither. The moment that symptom appears, no time is to be lost in calling the doctor, for the whole crop is at stake. The cause of the disease is the sting of a fly upon the leaves. The egg is deposited between the integuments of the leaf, and soon hatches into a small white worm—sometimes visible on opening the leaf to the naked eye, always by the aid of the microscope. If not attended to, the disease descends to the root and the whole plant falls a sacrifice. Amputate every diseased leaf, and early in the morning while the dew is on, sift on to the whole of the plants fresh slaked lime. One such powdering is generally sufficient, but if not, give them another dose, and the first rain that falls will wash the plants clean, and you will probably see them fresh, green, and stretching away toward maturity."

As we have never had any diseased celery to doctor, we give this remedy for what it is worth. The disease is probably induced by drought. As our celery trenches stand close by a ditch where salt water flows, we have tried the brine upon them once a week, and found it gave the plants great luxuriance. We have grown plants a yard long. Wherever a garden is near the shore it will be worth while to try the experiment of salt watering. It is a marine plant, and must have salt in some shape in order to attain perfection. Prof. Mapes recommends salt in the compost prepared for it. He advises to put at least three inches of either of the following composts in the bottom of the trenches.

1st. Well decomposed stable manure, with ten gallons of strong brine made from salt to each half cord.

2d. One cord of peat, turf, meadow-muck and woods earth, which has been previously decomposed by the salt and lime mixture, (3 bushels of lime slaked in water saturated with one bushel of salt) with one hundred pounds of Peruvian guano thoroughly mixed ten days before using."

Celery is a delicious vegetable, and makes an agreeable variety upon the table during winter. Its use is chiefly confined to cities, because it re-

quires some little skill to grow it, and gardeners in the suburbs can make it a paying crop. It might be introduced with advantage to every vegetable garden.

As to the preservation of celery, if you live near a market it is best to leave it to the market-man who sells it, buying only as you wish to use it. We have tried various methods of keeping it in a cellar, but have never succeeded well. Prof. Mapes recommended banking it in moist sand, and this will succeed as well as any thing. If you grow the article yourself you can keep it best in the trenches where it grows. The trench that you design to use first, before the ground freezes solid for the winter, will be sufficiently protected by a covering of seaweed or refuse straw a foot thick. That which you wish to preserve till January and later, should have a little house made over it. If your earthing up is not too high, two wide boards set upon their edges on each side of the plants, and then inclined till they meet at the top, like a letter A, will answer very well. The boards should have a thick covering of old straw or hay, and in mild weather should be left open at the ends for airing. We have fine celery preserved in this way at this date. Last winter we set a crotch at each end of the trench, put a pole upon the crotches, for the ridge pole of the house. Slabs two or three feet long and about half as far apart, formed the rafters. The covering was of seaweed a foot or more in thickness. It kept admirably till spring; you can take enough from the trenches at one time to last a week or two. It will keep fresh for that time in the cellar.

W. CLIFT.

Stonington, Ct., Jan. 15th, 1853.

For the New England Farmer.

COMPOSTING WITH MUCK.

MR. EDITOR:—I would like to inquire of you or some one of your numerous correspondents, the best method of working muck. I use it in the hog-yard and cow-yard in the summer season, and in the winter in my cow stable, on the plan of Professor Mapes; but this requires a great amount of labor. If there is any better way, I should like to know it, as I have a great quantity of muck and wish to work it in the most profitable way.

F. H. CURRIER.

M'Indoes Falls, Vt., Jan. 8, 1853.

REMARKS.—In the first place, we are obliged to our correspondent for his kind expressions in the part of his letter which we have omitted; and in the second place reply to his queries with pleasure.

There are certainly two or three ways at least, in which muck may be used in large quantities at a very little cost above the labor of digging and carting it. As the first mode, we refer friend CURRIER to Mr. HOLBROOK's plan, given in full in the 3d volume of the *Monthly Farmer*, page 381. This plan is to fill the drop or sink behind the cattle with muck, which was cleaned out and replenished every morning. His sink or trench was water-tight. Another mode is to cart quantities of the muck into the barn-cellar in autumn, and scatter it over the droppings each morning. This

absorbs the watery parts, prevents in a considerable degree the escape of ammonia, and so mixes the whole as to make it convenient to use, if the long litter is not incorporated with it. The bedding or litter should be kept by itself, and decomposition aided by throwing into a large heap, wetting and overhauling, or perhaps by scattering lime with it.

Where there is no barn-cellar the muck may be mixed with the manure as early as possible in the spring, and frequently overhauled.

A third method is to pile up the muck and mix with lime, ashes, or guano. When guano is used, let it be with the muck alone. When the muck and lime only are used, Dundonald says, the object is best attained by mixing newly-made and completely-slacked lime, with about 5 or 6 times its weight of muck which should be moderately wet. By this mode of conducting the process, a soluble saline matter will be produced, consisting of phosphate and oxalate of ammonia, which will be beneficial on most soils.

Mud of any kind should not be plowed in when recently dug; it should be composted with lime or putrescent manures, or lie exposed to a winter's frost, which will destroy its tenacity, and reduce it to a fine powder, that will serve as a valuable absorbent of feculent matter and urine, or it may be spread upon the field like ashes. But if it be plowed into the soil, before it has undergone fermentation by the action of salts, or has been mellowed by frosts, it will remain in lumps in the earth for years without much avail.

THE MILK BUSINESS.

We give below a copy of the petition to be presented to the Legislature as adopted at the great Milk Convention, at Cochituate Hall, in Boston, on Wednesday, the 26th Jan. In addition to this notice copies of printed petitions will be sent to gentlemen in various parts of the State. It is to be hoped that the towns will hold organized meetings, adopt the terms of the petition, sign them numerously and return them to the Legislature, or to the subscriber, who is one of the Committee chosen to receive them. SIMON BROWN.

Boston Jan. 26, 1853.

To the Senate and House of Representatives in General Court assembled.

Your petitioners respectfully represent that the Farmers of this Commonwealth are deeply interested in the production and sale of milk—that the number of cows kept within our borders is about 150,000, producing annually, a quantity of milk, valued, at the low rate of 8 cents per quart, and allowing 4 quarts per day to each cow, at the sum of six millions five hundred and seventy thousand dollars a year—that milk for the markets, is generally delivered by the producers in tin cans furnished by the purchasers, said to contain a specified number of quarts—that many of such purchasers still

continue to use the "ale quart," which is not recognized by the statutes now in force, while others use the wine quart, which is the measure prescribed by law—that great inequality, injustice and fraud, both to the producers and consumers, results from such confusion of the standard of measure—the cans varying from 8 1-4 to 8 3-4 quarts.

Wherefore, they pray, that it may be prescribed by law, under adequate penalties, that no cans shall be used in the delivery or sale of milk, except such as shall be legally sealed by the town or city sealer of weights and measures, and marked with a figure or figures denoting the capacity of such cans in quarts by wine measure—with a proper allowance, to be by law prescribed, for the reduction of the bulk of the milk in cooling.

And your petitioners as in duty bound will ever pray.

For the New England Farmer.

EXPERIMENTS—BEEES.

MR. EDITOR:—Although an entire stranger, yet, the fact that I am a subscriber and constant reader of your excellent paper, and that I am deeply interested in the calling which you so ably advocate, is to me a sufficient apology for this unceremonious introduction. Living, as we do, in an age which gives to the press an influence so great as to be almost, if not quite, beyond our comprehension, it is not strange that we should form a strong attachment to such papers as advocate principles and advance measures similar to our own.

Being a lover of nature, and a deeply interested observer of the various robes which she adorns herself with during the different seasons of the year, you may easily imagine with what unbounded pleasure I peruse such articles as allude to this interesting, instructive, and truly elevating subject. The grey and gloomy aspect of winter, the green of spring, with the sunshine of summer, and the golden tints of autumn, each, and all, tend to elevate and improve the mind, and if rightly received, gladden the heart and make man a truly happy being.

As I peruse the articles of your correspondents I often have reason to regret that farmers do not conduct their farms in such manner as to secure at the end of each year, a knowledge of the loss and gain, not only of each experiment, but of each farming operation. The satisfaction of this is known only to those who have tried it. It is my opinion that not one farmer in five knows how much it costs him to raise a bushel of rye, corn, wheat, or potatoes, nor in fact, any of his produce, yet how important it is, not only to know how much each costs, but how each can be produced the cheapest, and at the same time keep his farm in an improving condition. When an experiment is tried, not one in twenty is conducted in a manner best calculated to secure the desired result; for example, a field of corn fertilized with a new kind of manure, is no experiment unless a part of the field is fertilized with a manure, the fertilizing qualities of which are fully known; yet how seldom is this the case, and in fact how often is it the case that the whole field is used for an experiment; and again when the results are laid before the public, the field was manured with thirty loads, leaving you to guess whether they were drawn by dogs, horses or oxen. We ought to have the number of cords, and the price per cord, then we shall have something tangible.

I am deeply interested in the Honey Bee, and think their habits are as yet but little understood. They are yet in their wild state, but that they can be domesticated to a much greater degree than has been supposed, I have from experience every reason to believe. Should it be acceptable, I may at some future time give you the results of my labors. For the three past years I have cleared five dollars per year on each swarm. For ten years I have not lost a swarm by the bee moth; in fact, I have lost only two swarms, one winter killed in a tight hive, and one killed by the ants, which, by the way, are an insect deserving more attention than they have ever yet received. I am resolved to study their habits and ascertain their good and bad qualities. That they do some injury I know,—that they do more good than injury, I think an investigation will compel us to admit.

Hingham, Jan., 1853.

EDMUND HERSEY.

REMARKS.—We shall be happy to receive a condensed account of your experience with the bees.

CONVENTION OF MILKMEN AND FARMERS.

A convention of the Milkmen and Farmers of the Commonwealth was held in Cochituate Hall, on Wednesday, the 25th Jan., for the purpose of adopting measures to secure the adoption of wine or legal measure throughout the State, and to take such other measures as will promote the interests of the trade. The Convention was quite large, there being three or four hundred present, and among the members were representatives of all sections of the State.

The Convention was called to order at 10½ o'clock, and Mr. Simon Brown, of Concord, was chosen President.

On motion of Mr. Barnes, of Waltham, the proceedings of the previous meetings at Brighton were read by Benjamin Wellington, of Waltham.

Mr. S. G. Wheeler, of Concord, and William S. Lincoln, of Worcester, were elected Vice Presidents.

Mr. Brown made a few remarks, showing the necessity of carrying out the object for which the Convention had assembled. He said that in his own town (Concord) the difference of the income from milk as measured by wine or ale measure, amounts to \$18 75 per day. This amount is taken from the farmers wrongfully by the present system, and he was in favor of a thorough reform. In conclusion he announced the Convention as ready for business.

Mr. WHITNEY, of Stowe, thought the Convention might aim at too much and accomplish but little. He thought it should confine itself to the one object of securing the adoption of the wine, or legal measure. What is wanted is that the can shall be by law declared a measure, and it will then be obliged to be sealed. With regulating the price of milk or the washing of cans, he thought the Legislature should have nothing to do. The Convention should memorialize the Legislature to pass an act requiring cans to be sealed; the members should then petition for the act over their signatures; and then petitions should be circulated among the producers, pledging themselves not to

sell by other than the legal measure. The gentleman stated as the result of a careful calculation, that by the measure proposed, the same quantity of milk which has heretofore sold for \$100 will sell for \$122 in wine measure.

Mr. HOOPER, of Concord, advocated the passage by the Convention of a resolve that they would have the same price by the reduced measure as by the large measure.

Hon. SETH SPRAGUE, of Duxbury, moved that this Convention concur in the resolutions passed at a former Convention, adopting the wine measure as the standard for milk.

Mr. WHEELER, of Concord, said the business of the Convention was to regulate the interests of four classes—the milk grower, the men who buy it from the grower, the retailer, and the consumer. The adoption of the wine measure and sealed cans he was satisfied would do this. With regulating the price of milk the Convention had nothing to do.

Mr. SPRAGUE argued that no combination to fix the price of milk would in the end be successful, as it would be regulated by the demand. He believed the plan of substituting wine measure would be adopted generally by all producers.

Mr. CHAPIN spoke of the great necessity of having sealed measures, and adduced as one argument the fact that bills for milk sold by other than the legal measure could not be collected by law.

Mr. ROBINSON, of Dorchester, thought that if the Legislature refuse to grant the petition proposed, that the producers and traders should assemble and regulate the matter for themselves.

Mr. MARSH, of Cambridge, said that he supposed the object of the convention was to adopt wine measure, but it appears that it is to raise the price of milk. He dissented from the charges made against the retailers of milk, in furnishing cans which hold more than they are marked. He believed the whole trouble laid with the farmers themselves. They themselves reduced the price—when they got a new market in Boston by means of the railroad—and now when a pinch comes, they start the movement. He thought some farmers as well as milkmen would be found guilty of certain delinquencies, such as “milking the black-tail cow,” &c. He was aware that the farmers did not get enough for milk. In four years he lost in the milk business \$1000, and he now wants to be able to make it a paying business. He did not believe the people at Boston would refuse to pay a good price for milk if they could have a good article, instead of milk and water.

Mr. WHEELER of Concord defended the farmers, and urged that the fraud in the matter consisted in the retailers furnishing the wholesale purchasers with ten quart cans and paying for but eight.

Mr. NASH did not believe the Legislature would act in the matter, because the farmers have the matter in their own hand, and if they say to the purchasers bring us sealed cans, these cans will come into use.

Mr. LAKEMAN, of Charlestown, thought the milkmen who attempted to impose poor milk upon the women of Boston would get his pay as he went along.

Mr. BROWN from the Committee to petition the Legislature, submitted the form of petition which had been prepared, and which may found in another column.

Mr. Wm. S. LINCOLN, of Worcester, advocated the confining the request to the Legislature to the sanctioning of a sealed can; and that the members themselves resolve that they will, after the first of April, adopt the wine measure in retailing. If farmers cannot sell their milk at paying rates they had better make butter of it.

A motion was made to amend the resolutions, so as to make the new measure go into effect on the first of April, instead of the 1st of February. This was opposed by Mr. Barnes of the Business Committee, as it would allow persons disposed to make trouble, time to supply themselves elsewhere. The motion was subsequently withdrawn.

After a long discussion, the resolutions of the former Convention were taken up and adopted separately. The third was so amended as to make the time of carrying the new measure into operation the first of February. The resolutions were then adopted as a whole unanimously.

The Convention then at half-past two, adjourned.—*Journal.*

For the New England Farmer.

FARMERS' LIBRARIES.

BY WILLIAM F. BASSETT.

MR. BROWN:—With your permission, I will venture to suggest to your subscribers the propriety of "Farmers' Libraries" in connection with "Farmers' Clubs." The advantage of the latter has been frequently urged in your columns, and I think the former should be an inseparable accompaniment to every town club. I know not how many such institutions have already sprung into existence within the extensive circle of your "reading room;" but I am certain that there are few such in this section, and I think I may safely add, but few permanent public libraries of any kind. I say permanent, because I am aware that school libraries have, by legislative aid, been formed in large numbers in various places, but which as far as my information extends, contain within themselves the elements of destruction.

They have no provision for the acquisition of new books; and embracing a space quite too limited, the few books which they contain are soon read and they then become "old stories;" and beyond this, which is an item of much importance to the farmer, they rarely contain agricultural works.

Agricultural books having comparatively a limited circulation, and consequently being more costly, I was about to say, places them beyond the reach of the small farmer's purse, but experience whispers, "they fill the purse faster than they drain it;" well, at any rate, their cost is such as to deter many from obtaining them, and thus withholding much valuable knowledge which every agriculturist ought to possess.

Now, every one knows the superiority of associated over individual action in other matters pertaining to the interests of the community, but I have good reason to believe that few realize the advantages to be derived from it in connection with the subject before us, or if they do, they are lamentably negligent of both duty and interest.

Now I do not wish any farmer to buy any less amount of agricultural reading, either in books or periodicals, but if in addition to your present literary expenditures you would each contribute

something to a common fund for common benefit, you might, in my opinion, derive an almost incalculable benefit from it.

Let us illustrate. Suppose forty individuals wished to obtain each two books, which would cost them three dollars to each person; if they went on to purchase them separately, they might, perhaps, all buy the same works, and there would be only two different works among the whole; but let those forty persons unite their funds and the result would be eighty different books of equal value, without making allowance for discount on large purchases which would make the disparity still greater.

Perhaps some will say they cannot afford to spare so much money; that they require every cent to support their families or pay their debts; but stop a moment, good friend! are you aware that your duty to your family requires you to supply food for their minds as well as their bodies, and is there not some little articles, tobacco or tea for instance, that cost you more than double that sum, and which you would be better without!—Then it is only for one year, and a trifling annual outlay of say fifty cents, afterwards, will swell your library to hundreds, and perhaps thousands of volumes comprising every agricultural work of value and histories, biographies, and travels enough to furnish a useful and agreeable occupation for every leisure moment of yourself and family.

Don't hesitate, then, but go immediately and tell your neighbor you are determined to have a town agricultural library, and request his assistance.

W. F. B.

Ashfield, Jan. 17, 1853.

REMARKS.—Excellent suggestions. You cannot do better, friends, than to act upon them at once. By way of encouragement to the writer, we will say that in some towns the work is already begun. Where town libraries are already established, the farmers are requiring scientific books upon agricultural subjects; some of the farmers' clubs are also gathering libraries for their own use.

Any town may by statute raise one dollar on each poll the first year to form a library, and twenty-five cents a year afterwards, to increase it.

THE HORTICULTURIST.—This popular periodical has been transferred from Albany to Rochester, and is published by JAMES VICK, Jr., P. BARRY, Editor. The price is to be \$2 a year, instead of \$3, as heretofore, or \$4 with colored plates. The January number is illustrated with a beautiful engraving of the Sheldon pear, and half a dozen outlines of other pears, with a view of the residence of the late A. J. DOWNING, and numerous points of interest in the beautiful grounds about it. The number is filled in every respect with useful and pleasing matter, and we heartily commend it to every lady and gentleman of taste in the country. Such a work, widely extended, must have an important influence not only on the general aspect and prosperity of the country, but on the moral condition of the people.

URBANISTE PEAR.

The original of the above beautiful portrait was plucked from a tree in the garden of Col. WILDER, of Dorchester, and furnished us by him as a fair subject to be engraved. In the description below, which we take from Downing, it appears that the Urbaniste compares, nearly, in deliciousness of flavor, with "the old Doyenne or Virgalieu." These are other names for the old and favorite St. Michael, a pear better known, perhaps, than almost any other in this region. The above engraving is a very perfect figure of the fruit, and branch on which it hung, and is much more beautiful in its outlines than any representation we have seen in the books.

"The Urbaniste is a fruit for which we confidently predict the highest popularity in this country. In its delicious flavor it compares, perhaps, more nearly with the favorite old Doyenne or Virgalieu, than any other fruit, and adds, when in perfection, a delicate perfume, peculiarly its own. Its handsome size and appearance, and remarkably healthy habit, commend it for those districts

where, from neglect or bad soil, the Doyenne does not flourish. The tree is a moderately vigorous grower, and though it does not begin to bear so early as some of the new varieties, it yields abundant and regular crops, and gives every indication of a long-lived, hardy variety. For the orchard or garden in the middle States, therefore, we consider it indispensable. With so many other fine sorts, we owe this to the Flemish, it having been originated by the Count de Coloma, of Malines. It was first introduced into this country in 1823. Young shoots upright, short-jointed, grayish yellow. Fruit of medium size, often large, pyramidal obovate. Skin smooth and fair, pale yellow, with gray dots, and a few russet streaks. Stalk about an inch long, rather stout, and inserted in a well marked or rather broad depression. Calyx small, closed and set in a narrow basin, which is abruptly and rather deeply sunk. Flesh white, (yellowish at the core,) buttery, very melting and rich, with a copious, delicious juice, delicately perfumed. Ripens from the last of September till the end of November, if kept in the house."

For the New England Farmer.

HONEY BEES.

MESSERS. EDITORS:—A subscriber wishes to know why swarms of bees so frequently die in winter—and sometimes in other seasons of the year, without any apparent cause. Permit me to reply to this inquiry through the medium of your excellent paper, and I will communicate some truths that have fallen under my observation during a term of thirty years. During several of the first years of my keeping bees, I fell into the same error so often committed at the present day, by having no ventilator to my hives during winter, except where the bees pass out and in at the bottom of the hives; the consequence was, I lost many valuable swarms as I supposed, by freezing to death. I tried to winter them in the cellar; the dampness would mould the comb, then the bees would become sickly and frequently die. I then concluded to let them stand in the bee house and take their chance. I watched year after year to ascertain what kind of weather affected them most; I found when there came snow attended with wind drifting around the bottom of the hives closing the entrance, such swarms were certain to die by suffocation before morning. I have known several instances of a person's losing their entire stock of bees in a *single night* by suffocation, caused by the snow drifting in around the hive. I have also lost valuable swarms by a few dead bees dropping down inside, closing the mouth of the hive so as produce suffocation.

My opinion now had become completely changed in regard to the manner of treating bees, during winter seasons. I then made a new set of hives with chambers and honey drawers to fit and to obviate the difficulty of the bees being smothered in future from *whatever* cause. With a three-fourth inch centre bit, I bored a hole through the front side of all my hives about eight inches from the bottom, fixing wires across the hole horizontally inside of the hive at such distances that a bee could not quite get through. This I called the ventilator. The reason why they should not pass out and in at the ventilator is this:—

Bees are notorious robbers, and a hive can better defend themselves, if there is but one point where they can be attacked. I put all young swarms that come out into this kind of hives; the bees would close up the ventilators in summer with wax. About the first of Dec. I would clear out the ventilators with the point of an awl and they would remain open during the winter. I also raised each hive from the bottom board, not quite high enough to allow the bees to creep out, by putting a small wooden wedge under each corner of the hive; if the snow blew in about the hives closing them ever so tight at the bottom, the ventilators would supply the swarm with sufficient air to prevent suffocation. I put no straw about my hives—used no quilts to cover them—yet my entire stock of bees would stand the severest winter that ever blew. Other bee masters in the neighborhood, who had been in the habit of putting their bees in the cellar, seeing how mine wintered, have treated their entire stock in like manner, and have not lost a single swarm.

During the severest weather, when the thermometer indicated ten, sometimes sixteen degrees below zero, I would examine my bees at sunrise.

As the sun shone in through the ventilator, I could see their operations; they would be close against the ventilator, and as lively as in summer, seeming delighted to breathe the fresh air. No cattle, fowls, boys, or anything else, should be allowed to disturb bees in cold weather; and I believe a good swarm of bees cannot be frozen to death in a hive well supplied with comb and honey, rightly ventilated, and not disturbed, in the climate of Massachusetts.

Bees are liable to fail in the warm season of the year from various causes. In the first place, however short-lived the working bees are, the queen, I think, lives to be several years old; yet the time must come when she will die. If her death takes place in winter, there being no brood comb in the hive, however numerous the swarm, they will not be able to provide another sovereign. (I never knew a hive of bees that lost their queen in the winter, make any effort to supply themselves with a new queen, except in one instance.) [See *Boston Cultivator*, of April 24, 1847.]

When warm weather returns, this swarm will remain inactive in the hive and dwindle away, till the bees of some other hive step in and take away their honey, or the bee moth takes possession of the hive. I have lost as many as four hives of bees occasioned by losing their queen in winter.—About three years ago, in February, I found the queen on the bottom board of one of my best hives apparently dead. I placed her in my hands; by breathing warmly upon her for a few minutes, she was restored to her usual activity. I opened the chamber of the hive where she belonged, removed the communication cap and placed her among the bees. In March, I found her again on the bottom board, apparently lifeless. I warmed and returned her to the hive as before. About the first of April, I picked her up a third time, but the vital spark had fled. I examined her through a magnifying glass, and found her antennae gone, three of her feet worn off; no doubt she died of old age. The swarm remained inactive in the hive till some time in the summer, when the bees of another hive took away their honey.

Another reason why a hive of bees may run down in summer, is this:—When a hive of bees becomes pretty numerous in the spring, they go to work and erect four or five royal cells; in each of these cells may be found a young queen; they all hatch about the same time and send out a swarm accompanied by the *old queen*, leaving the young queens in the old hive. If we go some morning about eight days from this time, and place the ear against the old hive, and hear the young queens piping, (so called) we then expect a second swarm out of the old hive—which takes place from nine to fourteen days after the first swarm. Sometimes there will be a third swarm. Now it occasionally happens that two or more queens go out with second or third swarms; (I have seen three;) when this happens, they may light in two or three different places, each bunch of bees having a queen; they should all be collected and put into one hive. Sometimes all the young queens will go out of the old hive with the second swarm; (oftener with the third swarm;) in this case all the queens but one will be put to death during that day or the night following. Now the old hive being destitute of a queen, and but few workers, will run down in the course of the summer (as described in the case

where a hive lost their queen in the winter.) I have lost several old hives of bees in the manner last described.

I have said second and third swarms are always accompanied by young queens. Now the young queen in the course of a few days goes abroad (it is supposed to meet the male on the wing.) When she returns, not being accustomed to leave the hive, she is liable to make a mistake and enter a wrong hive, especially if there are other hives on either side resembling her own; she is immediately seized and put to death.

A few years ago I found one of my young swarms in great commotion just before dark; they were forcing an entrance into every hive in the bee-houses, notwithstanding the strong exertions made by every hive to keep them out. They were making the greatest effort to enter a hive standing next their own, contending manfully till it was so dark they could no longer see to fly. It required no effort on my part to imagine the cause of all that was transpiring. Early next morning I went in search of the lost queen. She had entered the wrong hive where her subjects were making the most diligent search the night before. After being put to death she was thrown upon the ground beneath the hive. Now this young swarm having lost their sovereign before there was any young in the hive, soon made their abode among the other swarms. I have known other young swarms broken up in like manner. To prevent other similar occurrences I have my hives painted different colors, making such a contrast between them that the bees soon learn to know their own.

A. KILBURN.

Lunenburg, 1852.

REMARKS.—We are obliged to our correspondent for his full account of the cause of death among bees in the winter. It was received last February, and just after we had two or three shorter articles on the same subject, and found it more convenient to insert them. We are often obliged to defer long articles when they are really much better than some of the short ones which we insert.

A BIRD CONVENTION.

We witnessed a few years since, a congress, or convention of birds, the character of which was inexplicable, and is unexplained in all ornithological works. We question whether Messrs. Audubon or Wilson ever saw the like, for if they had they would have been quite likely to have made a note of it. Spending some days at a friend's house in Wyoming county during haying time, we were among the mowers, one of whom, with his scythe, cut in twain a large spotted adder, or milk snake, the parts of which he tossed over the fence into the public highway. In a few minutes, birds began to collect upon the fences on either side of the dead snake, and within one hour there was a large flock composed of almost every variety of birds of our forest. It was truly a mixed assemblage; sitting upon the same rail were birds that we seldom, if ever see in so close proximity, twittering, fluttering, singing, as if they were having a jubilee.

Occasionally they would leave the fences, light in the road, and form a hollow square, in the centre of which would be the body of the dead snake. The scene continued about two hours, when the

birds mostly returned to their haunts in field and forest.

It was as if a common enemy had been slain, and they were celebrating the event, for their demonstrations were joyous ones—had none of the appearance of funeral obsequies. The species of snake to which the dead one belonged, fascinate birds, and thus make prey of them—they break up their nests, devour the eggs and unfledged young ones;—do not these facts furnish a solution of the mysterious and singular gathering? But by what silent and unseen agency did the news go out to all the haunts of these birds in woods and meadows, bush and brier, orchards and gardens, and so soon effect a gathering so numerous and incongruous.—*Rochester Union.*

FARM ACCOUNTS.

At a recent meeting of the *Concord Farmers' Club*, the question for discussion being *Farm Accounts*—

Dr. REYNOLDS said, every farmer would find his advantage in keeping a debt and credit account, not only with his male and female help, but with his cows, oxen, horses, hogs and sheep. He should charge each animal, or each lot of animals, with their cost, the expense of keeping, losses by disease, injury and death; credit them with their increase, milk, butter, cheese, labor, wool, mutton, pork, beef, product of sales when sold alive, &c.

In the same way he should keep an account with each field, charging it with its value, taxes, manures, and labor expended upon it, and giving credit for crops and improvements. Thus he would know his profit or loss from year to year; what crops and what animals are most profitable; would benefit by his experience and might have accurate information for his neighbors.

SWON BROWN said such accounts might be easily kept: all that was wanting was an effort to begin. He hoped they would all begin on the first of Jan. Each one might keep such a journal as he pleased. He has for years kept a journal in which he not only kept his accounts with his help and his neighbors, but in which he has noted the time when the birds appear and depart, when the blossoms open, when he planted his ground, how much seed he sowed, and a variety of incidents of domestic as well as of a philosophical nature. We are creatures of habit; if we once get into the way of keeping such a record we shall find it easy and pleasant. He also spoke of the moral effect. It would make a man not only a better farmer but a better man, and better citizen. He would know *himself* better, as well as the state of his affairs, and would have more courage to engage in the conflicts of life.

ELIJAH WOOD, Jr., said he had written much more since he joined the club, than ever before. He devoted at least one evening a week to writing and reading. It might be easily done if we would set about it. If he raised a good crop he recorded the amount and the mode of cultivation. Farmers

should keep an accurate account with their dairies. This might be done with more ease than with their crops. He intended to write more than he ever had done, and he would do it for his own improvement, if for no other reason.

WM. D. BROWN had kept a journal and daybook together in which he noted the day's work, the state of the weather, the state of the season, the times of planting and maturing of crops, of commencing and finishing haying, and such incidents as interested him at the time. He wrote something in this book every day—and he thought every one might steal time to do this.

J. B. FARMER spoke of such journals as valuable meteorological registers.

DR. REYNOLDS spoke of them as historical documents of great interest to posterity. What would he not give for such a record kept by our fathers for 50 years past. They would contain a history of our families and of the town, intensely interesting not only to our posterity, but to the future historian.

For the New England Farmer.

A QUERY.

MR. EDITOR:—In the "Farmer's Fireside Talk" of your Essex correspondent, is the following remark: "If the stalk is returned and plowed in, in the fall or spring, the ground receives back nearly the value it has given out. It receives the *same kind* it gave out; and I think more in amount of fertilizing matter than from a cord of stable *matter*." I suppose this last word should be *manure*, when it would read "stable manure." It is well known that one crop requires a larger amount of one particular mineral substance than another, and that soil "gives out" to one crop more of this mineral, than it does to another. The latter may require more silex than the former. Now if a crop requiring a larger amount of lime is grown on a field, the soil is proportionably exhausted of lime. Suppose this crop to be corn, and that you wish to return to the soil the lime which it has "given out" to the corn. Certainly you must return the "estover" and "plow it in," or return it in some other way. But I would ask your correspondent, or "the man I spoke of," if the manure, liquid and solid, produced by feeding upon the "estover of an acre," would not return to the ground "nearly the value it has given out" of mineral matter? Does not the soil receive in this way, the "same kind" that it gave? I suppose that mineral substances, as lime, silex &c., are not digested in the stomach of the animal, and that only a small amount of them is taken into the circulation, but that they pass off in the dejections, and may thus all be returned to the soil, and the "estover" be used at the same time as food for the stock. Is not the "same kind" as certain to be returned to the soil in this way, as though the stalk were plowed in, or burned, and the ashes returned to the soil? The estover is, when well cured, very valuable and healthy food for cattle, and if it can be made to feed the *stock first*, and then feed the next crop equally well, it will be doubled in value—a matter of some importance.

Jan. 1, 1853.

J. R.

For the New England Farmer.

"THAT IS MY HOME."

BY A. G. COMINGS.

Many a farmer manages in such a way that neither his sons nor his daughters can take any pleasure in directing the eye of a stranger to the family dwelling, and saying, "That is my home."

It is not in the erection of costly and temple-like houses, or ornamenting other buildings with much profitless expense, that "home" is made most beautiful. These costly decorations may appear very splendid at first, but they are of that character which loses beauty instead of increasing it. The mind of youth is reaching forward, and is most pleased with that kind of ornament which every day grows more beautiful.

Most men, in building houses, expend much money in making the house showy. One, two, or five hundred dollars spent in this way is a common item in building. But this is all just "paying too much for the whistle." Such beauty only pleases while it is new. The second look at it has no interest. The eye ceases to behold with pleasure whatever, from its fixed character, becomes familiar and established. Simplicity, order and neatness, constitute the sum of all beauty, in everything which is of a fixed character.

Let the farmer adopt a different course, and plant around his neat and simple dwelling, one, two or five hundred dollars' worth of trees, shrubs, vines and flowers, and what a world of beauty and attraction it would present. These are "things of life," and their beauty will be progressive.—When the eye of a stranger shall rest upon it, he will exclaim "how beautiful!" and that lovely daughter, whose presence always gives joy and gladness to the home circle, will be happy always, when she thinks "that is my home." And that noble-spirited young man who would have left the homestead years ago, but for these attractions, will feel a conscious elevation of character, a growing greatness, inspired by the objects with which he is surrounded. It is certainly true that the character of men is shaded by the objects which constantly engage their attention and care.

There is not another class of men in the world to whom is granted such a privilege of uniting beauty with worth, pleasure with interest, as the farmers. And the most attractive beauty, too, is that which will grow more beautiful and more profitable at the same time.

The attractions of home are also full of moral power, and social refinement. The eye of love never sparkles with more brilliancy than when it is surrounded by the blandest beauties of natural scenery. Earth affords no happier spot than where the throbbing, anxious, hopeful spirit of youth is quieted and satisfied.

The farmers of New England may refuse to gratify their sons and daughters, by attention to the rural scenery about their dwellings, and see their sons and daughters become "anxious for a trade," and their daughters determined on "going to the factory," or they may see them wedded to home as to an earthly paradise. And taking up this idea of paradise, it is proper to remark that in the scriptural description of Eden's paradise, as in every vision of poetic thought, the abode of peace and happiness is in the midst of rural scenery.

It is one of the greatest matters of importance, in relation to society, morality, religion, or even patriotism, that our young men should be more attached to agriculture and its kindred arts; to home and its associations. This will never be brought about by accusing the young men of being reckless and unsteady. The mind of a noble youth is to be captivated, not chained.

To look upon a blighted and leafless tree, and upon a family where the young men have fled from home to trade or speculate, and the young women to the factory, leaving matron and sire to die alone, produces a similar sensation.

To carry our agricultural matters to the proper and desirable elevation, we must have a deep interest existing in the minds of the intelligent and enterprising sons of farmers.

To have our young men attached to home, their beautiful and lovely sisters must be there, and happy in the circumstances which surround them. A home where the girls are not contented, has a cold and vacant air, like an old bachelor's hovel. They fill a large place in the world of life. And the very tone with which a young woman says "That is my home," describes the scenery without and the spirit within that dwelling.

There is a growing complaint that young people are becoming indifferent to home and parental love. It is of little use to grumble and complain. The remedy is an easy one. Let the young be supplied with well chosen, interesting and instructive reading matter, every week, and let attention be given to the surrounding scenery, according to the common idea of all ages, and God will bless the bowers and smile on those who dwell happily among them, and age will renew its youthful joys, and the rose and the myrtle will beautify each other, and love and hope and joy shall be there; while birds shall sing in the spring time, a cooling and refreshing shade be felt in summer's sultry day, a golden harvest be gathered in autumn, and a happy group and a bountiful board within and the merry bells without will cheer up the wintry day, and the good old song of "Home, sweet home," shall warble with melting melody.

Mason, N. H.

How THEY USED TO PLOW.—In some parts of Scotland, in former times the plows used to be drawn by four horses abreast, and required the assistance of three men. The business of one man was to drive. For that purpose he placed himself between the middle horses, with his face towards the plow, to guide it straight, and in this position he stepped backwards with the reins in his hand. Another walked behind the horses with a *cleeked* staff, which he fastened in front of the beam, and by means of it regulated the depth of the furrow by raising or lowering the plow, as occasion requires. The plowman followed with hold of the stills; and in this formidable and ludicrous manner they repeated their attacks on the soil.

In harvest, a basket machine was placed on horseback for carrying home the grain; and persons were employed on each side with forks to keep it in a proper poise. It is said that the practice is yet to be met with in Galloway.

Many practices subsisting even at this day in Ireland are still more ridiculous. Mr. Arthur Young tells us that in Donegal he has actually seen horses plowing by the tail!—*Exchange*.

ORGANIC ELEMENTS.

Vegetation is composed principally of the four organic elements, yet the relative proportions in which they occur in plants, are by no means uniform. Still they are all alike, equally indispensable to the growth and development of the system; they are by no means necessary in an equal degree. In most crops, when artificially deprived of their moisture, an analysis of the remaining solid parts ordinarily gives from forty to fifty per cent. of carbon—nearly or quite one-half of the actual weight—while the oxygen constitutes not far from thirty-three per cent., the hydrogen five, and the nitrogen seldom more than two and a half. This is very nearly the relative proportions in which these organic elements exist in most of the farm products applied for the sustenance of animal life. In one thousand parts their proportions are as follows:—

	Hay from young clover 3 months old	Oats.	Clover Seed.	After-math Hay.	Peas.	Wheat.	Hay.	Potatoes.
Carbon,	507	507	494	471	465	455	458	441
Hydrogen,	66	64	58	56	61	57	50	58
Oxygen,	329	367	350	349	401	431	367	439
Nitrogen,	88	22	70	94	42	34	15	18
Ash,		40	28	100	31	23	90	50
	1000	1000	1000	1000	1000	1000	1000	1000

The quantity of water present in most vegetables is generally large. Exposed to a temperature of 230° fahrenheit, the loss was as follows, viz:—

1000 parts of	lost	722 parts of water.
of Potatoes	166	"
" of Wheat	158	"
" of Hay	136 to 150	"
" of Aftermath Hay	151	"
" of Oats	113	"
" of Clover Seed	66	"
" of Peas		"

So far as regards the form, or state of combination in which carbon, hydrogen, nitrogen and oxygen, minister to the growth of plants, I refer the reader to the following extract from a lecture delivered by Prof. Johnston upon the subject. He says:—

"Neither of these elementary bodies is likely to enter directly, or in a simple state, into the circulation of plants. The former (carbon) being a solid substance, and insoluble in water, cannot obtain admission into the pores of the roots, the only parts of the plants with which, in nature, it cannot come in contact. The latter (hydrogen) does not occur either in the atmosphere or in the soil in any appreciable quantity, and hence, in its simple state, forms no part of the food of plants. Oxygen and nitrogen, again, both exist in the atmosphere in the gaseous state, and the former is known to be inhaled, under certain conditions, by the leaves of plants. Nitrogen may also in like manner be absorbed by the leaves of living plants, but if so, it is in a quantity so small as to have hitherto escaped detection. The two latter substances (oxygen and nitrogen) are also slightly soluble in water, and, beside being inhaled by the leaves, may occasionally be absorbed in minute quantity along with the water taken in by the roots. But by far the largest proportion of these two elementary bodies, and whole of the carbon hydrogen which find their way into the interior of plants, have previously entered into a state of mutual combination

—forming what are called distinctive chemical compounds. Before describing the nature and constitution of these compounds, it will be proper to explain, 1^o the constitution of the atmosphere in which plants live, and, 2^o the nature of chemical combination and the laws by which it is regulated.”

For the New England Farmer.

FARM WORK FOR THE CENTURY.

BY H. F. FRENCH.

MY DEAR BROWN:—You probably are aware that a bill is pending before the Legislature of New Hampshire, providing for a Board of Agriculture and a Commissioner. Its provisions are similar to those of the Massachusetts Act, the Commissioner being substantially the same as the Secretary of your Board.

Again and again, the question has been asked, what is the use of such a Board, and what are to be the duties of such a Secretary or Commissioner? Perhaps the views of others may differ from mine, as to the reply to these questions. If they do, there is so much the more reason that some one should undertake to be definite, so that a full discussion of the subject may be had, and that we may enlighten the ignorant, and learn from the wise.

I propose briefly to suggest some among the many things, that are *waiting to be done* in New England, under the direction of Boards of Agriculture for its advancement; and for the sake of perspicuity, I will arrange my ideas like an old-fashioned sermon, under distinct heads. The Secretary or Commissioner should give his early attention—

I. To the *formation of farmer's clubs* in every town, holding out as an inducement to the members of them, the idea that they would be especially remembered in the distribution of all publications, whether of the patent office or of transactions of the State Board or county societies, and of seeds and plants, which might come under his control. The officers of these clubs would be his reliable correspondents and assistants in all his movements.

II. He would deliver *lectures* at meetings of the town clubs, or county societies, of a familiar and practical character, and engage others in *discussions*, in the way best calculated to develop the talent and knowledge of the farmers themselves. His lectures would involve the *mechanical* treatment of the soil, as by plowing, harrowing, subsoiling, under-draining and the like—the *chemical* treatment of it by manures of various kinds, as guano, the phosphates, lime, salt, and the various composts, as well as barn manure—the adaptation of the various kinds of soil to different crops, whether of grain, grasses, roots or fruits.

In short, such lectures might touch upon any branch of knowledge, whether of a scientific, or practical nature, which might be best adapted to the occasion.

III. He would open a *correspondence* with all the leading Agricultural and Horticultural societies of this and other countries, with the heads of our Agricultural Department at Washington, (when we get one!) and with distinguished agriculturists, so as to act in concert with the *progressive minds* of the world, and be kept constantly informed of the attainments of others.

IV. He would be prepared with accurate *analyses* of the various products of the earth, as of wheat, corn, the grasses and roots, as made by the most reliable chemists, at home and abroad, showing how these products are affected in their constituent elements by the soil on which they grow.

He should have, also, analyses of specimens of the various classes of soil, as of the pine plain, the peat and swamp mud—the granite soil of the hills, the alluvial lands of the rivers, and the various clays, so as to give as accurate information as the nature of the case admits, of the peculiar adaptation or deficiencies of each for the growth of particular crops.

The range of investigation in this direction is literally boundless, for although nature is ready to disclose her mysteries to the earnest student, new depths are constantly revealed.

V. He would institute systematic experiments, upon an *experimental farm*, which some public spirited man will present to the State, if not otherwise provided. He will thus be able to settle many disputed points, which ought to have been settled years ago.

VI. He would engage in an *agricultural survey* of the State, taking, perhaps, one county each year, in the manner, somewhat, of the surveys made of Seneca and Madison counties, in New York.

Such a survey should show, among other things, 1st, The *history*, political, civil and religious, of the county, very briefly. 2d, The *geography*, as the mountains, plains and valleys, with the rivers, canals and water-powers. 3d, The nature and resources of the *forests*, the value of the several kinds of timber and for what uses. 4th, The *climate*. The mean and extremes of heat and cold, at different periods, and at the same periods in different years—the days when the injurious frosts came latest in spring and earliest in autumn, with a view to ascertaining the best times of planting and sowing, and of gathering the harvest. 5th, The *geology* of the county; in general its rock formation, and in particular the value and uses of its rocks for building and other purposes,—its mineral resources of all kinds, and especially its deposits of mineral and vegetable manures, as lime, marl, peat, swamp mud and the like.

6. *Statistics of agriculture*, as the average product per acre of each crop of corn, wheat, rye, oats, hay, potatoes and roots,—the average cost per bushel or ton of producing them, in the various localities, under common, and under the best cultivation,—a census of the population and how employed,—the number of all the cattle, horses, sheep and other live stock, in the county,—their value, and the cost and profit or loss of raising and keeping them,—the number of *farms*, with their extent in acres, how much is arable, pasture and wood; how much good pasturing will suffice for each animal, and on *how much worn-out pasture an animal may starve*; the various *breeds* of stock, and their points of difference and value; the amount of flour, corn, and the like brought into, and sold from, each town, with a thousand other interesting statistical facts.

7. The *botany* of the county, with a list of all its valuable trees, shrubs and plants; a list of all the noxious weeds, as the white-weed, thistle, witch grass, and the best mode of exterminating them.

8. *Entomology*.—Under this head all the noxious insects should be particularly described, such as the wheat fly, locusts, canker worm, curculio, and the means of preventing their ravages. Dr. Harris's valuable treatise nearly exhausts the first branch of this topic.

9. The *natural history of animals*, especially of those injurious to the farmer's interests, with a *discriminating tariff* of protection in favor of useful birds.

10. The commissioner or secretary would systematically, by means of carefully prepared circulars, filled with interrogatories, and through the best journals, and transactions of societies and by personal enquiry and observation, collect and arrange all the facts, theories and suggestions deemed useful to the cause, and prepare them in the form of an annual report to the board for publication, and distribution.

Here you have, hastily sketched, some idea of my views of the labor to be performed under the direction of a Board of Agriculture.

If our friends will continue the subject, and send you their suggestions of such additional matters as seem to them to require attention, I doubt not the Board of Agriculture, whenever established, will treat them with due consideration.

Your friend, H. F. FRENCH.

POWER OF THE SOIL TO RETAIN MANURES.

BY PROF. J. J. MAPES, NEWARK, N. J.

We propose in our present number to show the power of the soil to retain manures, and the means of improving this property when required.

For a long time it was supposed that all materials soluble in water would pass downward in solution, and thus be lost to plants—those who worked clayey soils claimed that, because water could not readily percolate their soils, that hence, they were not *leachy*, and therefore retained manures—while other operators with sandy soils argued that manures passed downward and were soon lost to the surface soil.

All these positions are false. It is true, that a fair proportion of alumina is valuable to soils and in the absence of carbonaceous matter is absolutely necessary for the retention of manures, but it is not true that the tenacious property of clay need exist to such an extent as to prevent the free filtration of pure water before the manures will be retained—for many soils which will pass pure water readily, will still retain, from impure water, all its impurities, permitting only the pure water to descend. Indeed this is true of all arable soils, and if it were not so, the water in all our wells would be unfit to drink from being surcharged with soluble organic matter.

Even the brown fluids of a barn-yard will not leach downward in the soil, without leaving all the fetid matter in the surface. Dig in an old barn-yard, but a few inches below where the soil has been before disturbed, and it will be found not to have become dark-colored, and not to contain any undue proportion of the soluble matters resident at the surface, but to be like the subsoil of adjoining fields.

Alumina (clay) has the curious property of receiving and retaining all animal and vegetable substances, and their gaseous products; until ab-

stracted again by growing plants, and for this reason a free clayey loam will purify water during its passage through the surface soil, retaining all the fertilizing substances originally held in the solution, and permitting the pure water to pass downward. Nor does this retaining power cease with organic substances alone, for many of the alkalies are also retained, and all of them to a certain extent. Excess of lime, potash or magnesia will pass down and therefore the chemist finds variable proportions of these alkalies in our well water.

This peculiar property of clay was noted by Mr. Teschmaker of Boston, in his public addresses many years since, and in our published addresses before the American Institute, as far back as 1840, the same truths are set forth. Within the last two years, Professor Way and other English chemists are claiming this as a new discovery.

Alumina is not the only substance in soils which has this retaining power, for carbon in every form has similar properties, and it is not important whether charcoal dust be artificially added, or exist in the soil by the decay of former vegetation or of manures; for in either case carbon is the result, and as such, has similar retaining powers to those of clay. Thus charcoal dust placed for a time near a fermenting dung heap, will receive and retain the gases arising from decomposition, and if placed in the soil will give out these gases again to the roots of growing plants. Privies, stables, &c., are rendered inodorous by the use of charcoal dust. Decomposed peat, turf, swamp muck, &c., are but varied forms of carbon, with some more partially decomposed vegetable matter. The dark color of soils is due to the presence of carbon; humus, vegetable mould, &c., are but modifications of carbon.

All know that an old and black garden soil will retain manure longer than field soils, and that a less quantity of manure will act in them, for the simple reason, that the carbon (charcoal,) contained in them, and arising from previous decay, retains the resultant gases from the decomposition of the manure until used up by plants.

Let any farmer try the following experiment and he will be satisfied of the truth of our statement.

Prepare four barrels by taking out the upper heads and boring small holes in the lower heads, stand the barrels on end and fill them with the following substances.

No. 1. Barren sand with one-tenth the bulk of clay intimately mixed throughout the mass.

No. 2. Barren sand with one-tenth of finely ground charcoal dust.

No. 3. A dark colored loam or garden soil.

No. 4. Barren sand alone.

Pour on all four barrels the brown solution from the barn-yard, and it will be found, that the water running out of the bottoms of Nos. 1, 2, and 3, will be colorless and without smell; while that from No. 4 will be unaltered and as offensive as when placed on the top.

The question may now be asked, "if the soluble results of vegetable decay do not filter downward, what becomes of them?" We answer, that resident in the earth's surface, from the combined influences of sun and air, they decay, and take the gaseous form; if the soil contains either clay or carbon, these gases are absorbed by them, until abstracted by growing plants. But if these substances are not resident in the soil, then the gases rise into the atmosphere, and are absorbed by bet-

ter prepared soils elsewhere, or are carried to the ocean and are thus lost for a time from the land.

Let our readers reflect that both the vegetable and animal productions of the earth's surface are continually decaying, and that nothing but the facts we have stated can account for continued fertility. For if the results of decay could filter downward in solution with water, long before this time, the whole amount of organic constituents would have passed below the fertile surface, all our wells would be filled with masses of filth, and both animal and vegetable life would have ceased. The simple facts are, that all organic manures do decay in the earth's surface, and are only lost by rising in the gaseous form, and not by sinking below the roots of plants, and therefore they should be plowed under to such a depth that their resultant gases when rising shall meet with a sufficient quantity of alumina or carbon to arrest them.—*Journal of Agriculture.*

For the New England Farmer.

FARMS—BUTTER.

FRIEND BROWN:—I have been for three weeks past viewing the *Farms* amidst the hills and vales "of the old *Granite State*." It is rather unfavorable at this time of the year, to decide on the fertility of the soils; yet, there are some indications left, to tell something of the land in this vicinity. There are many good *farms* in Hillsboro' country; having large dairies, the land being adapted for grazing, and a large number of cows are kept by many *farmers*, sometimes fifty. There is a great inquiry up here about the best mode of churning, and what churn is best adapted for use where large quantities of cream are to be churned. Please answer these inquiries, and oblige a large number of your readers. Yesterday while passing from Mason village to this place, I was deeply interested in the scenery through which I passed. Standing on an eminence, at the east of this village, the scenery around me was beautiful and grand. Below me a river, winding along in its serpentine course,

Leaping, and foaming in sportive glee,
To find its level
In the deep blue sea.

At the east, the Peterboro' Mountain lay along, filling up the back ground with its walls of *Granite* and *Mica* slate. And at the west, the *Monadnoc* Mountain reared its massive top amidst the clouds of heaven. How the soul seems to rise, (at such times,) in adoration and praise, to the author of Heaven and earth, that he has given us power to admire his works. But we shall never be fully satisfied until we stand on Mount Zion above, and drink in those pure and unalloyed delights.

"Where joys like morning dew distill,
And all the air is love"

Peterboro', Dec. 11, 1852.

J. R.

REMARKS.—The common thermometer churn is the best we have ever used where not more than 30 or 40 pounds of butter a week was made. The common dash churn is used in Western New York in some of the large dairies, moved by dog or sheep power, and is preferred to any other. The barrel and rocking churn are also used. Some like one and some another kind, best.

ALKALINE WASHES FOR THE SURFACE OF TREES.

Almost all the alkalies have in turn been used for this purpose. The trunks of trees have been white-washed with lime, and perhaps this is the worst practice which has been resorted to for the destruction of fungi and insects, and although at the time of its application, the lime is caustic and will decompose parasitical plants, this action lasts but for a very short time. The lime becomes converted into carbonate of lime, fills the ultimate surfaces of the bark, and prevents the healthy respiration of the tree; therefore, trees which have been treated with white-wash, while they present an apparently clean surface, are not in an entirely healthy state.

Solutions of potash when saturated, were found occasionally to destroy the tree, and this gave rise to its use in the form of soap, which will adhere for a greater length of time, and was found to be less deleterious.

One alkali, (soda) however, may be used with impunity, without the fear of injuring the bark of any tree; for, while it causes the rapid decay of the dead portions of the bark, it has no effect upon the living parts. If the body and branches of a tree be wetted with a saturated solution of a good quantity of sal soda, such as we have often described as Bleacher's No. 1 Soda, it will invariably improve the health of the tree—the inert portions of the bark will be softened, and mosses, and other fungi, will be decomposed—the cocoons and ova of insects will be destroyed. During the aftergrowth of the tree, the decomposed portions of the bark will be thrown off, leaving a clean and healthy surface. No tree can be fruitful, and improve in size and figure, unless its bark be perfectly clean.

The application of soda, made by dissolving one pound in a gallon of water, and applied in spring and late summer, will ensure vigor not attainable without such means, and will do away with the necessity of scraping or slitting trees to prevent their becoming hide-bound. Such trees as have smooth barks, may be rubbed with a woollen cloth one week after the application of the soda, and a shiny smooth surface will be produced.

We have a few trees in which the soda has been applied for three years in succession to the point where the branches commence, and it is now evident that the portion of the tree thus treated is larger and in finer health than the part immediately above it. We first saw this treatment at the seat of Robert Rennie, Esq., Lodi, New Jersey.—*Working Farmer.*

For the New England Farmer.

A CRACK FROM THE NORTH.

There is a profit in pork as well as poultry. The undersigned has recently butchered a swine which had brought a litter of pigs this season worth \$30. She was, when butchered, six feet in length, six feet two inches in girth, and weighed with the rough fat, six hundred and thirty pounds, at eighteen months old.

If any of my brother farmers in Massachusetts have, or can, beat this, this season, I will try again next.

RICHARD WHITTIER.

Grafton, N. H.

OXEN AGAINST HORSES FOR FARM WORK.

EXPERIENCE OF MR. GEO. DEWEY, OF HANOVER, N. H.

Horse teams upon the farm with good rigging make such a fine appearance that many take a great fancy to them. And such persons generally manage in some way or other to persuade themselves that they are much more serviceable and more profitable than oxen. On this subject the experience of our friend Mr. Dewey is well worth considering.

FIRST COST.—In the first place, the cost of a good span of working horses, says Mr. D., is at least twice the cost of a good yoke of oxen. And the wagons, harnesses, and other rigging necessary, will cost more than twice as much as for oxen; \$326 will not be more than enough to purchase two young and good working horses, with a wagon, and cart, and rack, and other suitable equipments, while the sum of \$160 will provide a choice yoke of oxen, and a cart and wheels, and rack, and all else necessary for them in ordinary farm work.

COST OF KEEPING.—Then the cost of keeping horses is well known to be considerably more than the cost of keeping oxen, even if the latter are ever so well taken care of. The blacksmith's bill is sure to be twice as much upon the horses, and then the wear and tear, and breaking of tools will go higher still. Horses are liable to numerous casualties. They get chafed, lame, sick, or something else, ten times where a yoke of oxen is troubled once. If the horses are at all active and spirited as they should be, they cannot well be trusted to any but a choice, careful teamster. Besides, hired hands are very apt to make them go sometimes with much more than useful speed. Now and then a horse is unharnessed from the plow where he has been hard at work in the field, and put upon the very top of his speed to the store, a mile or two off, to get a pipe or plug of tobacco, or some such indispensable article.

SERVICE DONE.—Oxen will do all kinds of farm work well, and many things altogether better than horses. For instance, starting out manure, hauling rocks, getting out wood, Mr. D. says that a strong yoke of oxen will do as much as a span of horses, if well kept, and oxen must be well kept to be profitable. Give the oxen the same keeping as the horses and they will follow them in plowing any length of time, provided the furrows be of equal depth, and they will do this through any weather, except the very warmest. The great fault of those who complain of the slowness of oxen, and their want of strength and endurance, is that they do not keep their oxen well. And another point of great consequence is, that the oxen are put to work at a very early age, and before they have had time to gain their proper size and strength. Horses do not so often have their early growth checked in this way. Besides, calves are often so meanly fed that they are greatly stunted by that also.

KEEPING.—They should be kept so as to be always fit for the butcher. Mr. D. has a farm of 150 acres, 40 of which is in tillage. He uses no other cattle for labor except one yoke of large oxen. They are so kept and used that they are fit for the butcher through the hardest of the work. During the first part of the winter, till March, they get hay in the morning, oat straw at noon, and

corn fodder at night. Later in the season they are fed with a peck of meal per day, with chaff or chopped hay, sometimes moist, in addition, and a bushel of turnips twice a week. The meal is made from corn and cobs—two bushels of cobs and one bushel of corn on the cobs, and perhaps a bushel in ten or twelve, of oats, are mixed ground together. Cattle do not feed so well on hay or on grain alone, as on a mixture. Vegetables are of great service to make them healthy. When Mr. D. feds cattle he gives them daily a bundle of green corn fodder in the summer and fall till the frost comes, and then green turnips and beets thinned out of the field, and afterwards a bushel of turnips and a peck of meal, like that above mentioned, till sold.

THE PROFIT.—Allowing well fed oxen to be just about as serviceable as horses, besides the extra cost in the beginning, the repair of tools, the extra expense of shoeing, risk of lameness and disease, and the great care needful in managing, there are other things that increase the profit of oxen. The manure they make is more valuable. The best kept horses will decrease in value \$10 annually, take one year with another, while oxen will increase in value. Mr. D. never buys a yoke of oxen till about six years old. If they do not prove just the team desired, he sells them in a year and gets another pair. They will do well till 12 years old. His experience for the last 20 years is as follows: where is presented the first cost of the oxen, the number of years kept on the farm, and the price sold at. And during that time the oxen have been the only team for farm work, and have not in all been turned out from labor for the purpose of fattening, three weeks during the 20 years.

Cost.	Time kept.	Sold at.
\$ 78.....	About 6 years.....	\$115
70.....	" 1 ".....	95
105.....	" 5 ".....	96
70.....	" 1 ".....	98
85.....	" 3 ".....	112
60.....	" 3 ".....	110
56.....	" 1 ".....	105
\$578		\$781
Cost.....		573
Profit.....		\$158
		<i>Granite Farmer.</i>

DON'T TAKE THE PAPERS!

In making an excursion, the other day, a little out of the State, we indulged ourselves as usual, in taking a hasty survey of the farms, buildings, orchards, &c., as we passed along. The glance that may be obtained, as rapidly as one rushes along in a car, is oftentimes a pretty good index to the whole establishment. And we have sometimes thought we could write a tolerably correct description of the habits of the inmates of an establishment by merely passing the premises.

One homestead we saw, worthy the age when cast-off hats and pantaloons ornamented the windows. The house had been erected with fair proportions and painted white; the elements had wasted the paint, leaving only patches here and there to indicate its original color, while the fences were scattered in every direction, like a platoon of routed troopers. The barn stood awry, rickety,

and uninviting, with all the avenues from the barnyard prostrate. Nothing loth, the cattle had forsaken its gloomy precinct, and were basking in the sunshine on the south side of the dwelling-house—one cow quietly chewing her cud with her nose over the threshold of the front door! All other things about the premises were in excellent keeping with this one point. While we wish the occupants much joy in their primitive possessions, we cannot help believing that they *do not take the papers*—or, at any rate, that they do not take the *NEW ENGLAND FARMER*!

For the New England Farmer.

• FARMER'S FIRESIDE TALK—TOPPING CORN.

Well, as I was telling you, the other evening, the man I spoke of had something to say about topping corn, as well as hilling up. I do pretty much as the way is here,—a few days before the corn is ripe, I cut off the tops of the stalks, and take them in for fodder; then, in say a fortnight or so, I gather the corn. After that, I cut the bottom stalks for fodder. That is generally the way about in this neighborhood. Some though don't cut the bottom stalks but let them stand, and in the spring cut them down with a plow, splitting the hills, as they call it, and then rake and gather the stalks into the stable yard.

He says he has great doubts of the advantage of this plan: and whether there is not more lost to the grain than is gained in fodder. His idea about that is something in this sort, if I can tell it right. "In the first part of the season, in spring and till about midsummer, the sap goes up or ascends, being drawn up by the roots, and it goes up to all parts of the plant. In the latter part of summer the sap goes down. The upward sap, he thinks, forms the stem and leaves of the plant. This it is which gives it growth and expansion. When the sap ceases to go up, it must be because the roots cease to take it up from the earth. The function performed by the roots in the early part of the season is changed. They no longer take up and convey sap to the stem and branches. The descending sap now begins to pass down. The leaves are now formed. The scientific writers upon the vegetable structure and economy tell us that the sap that is taken up by the roots passes into all parts of the plant, and lastly into the leaves;—and that in its passage through the leaves, it becomes changed, and passes again through the plant, a different fluid from that which passed up. The change which is made in the leaf is likened to the change which the blood of man undergoes in passing through the lungs. The difference, in fact, between the ascending and descending sap is so great, that there are plants whose sap in the spring when ascending is agreeable and nutritious, and is drank by the people of the country, but after midsummer, when descending, it is acrid, and even deadly poisonous. The inhabitants of the Canary islands draw off and drink the ascending sap of a species of *Euphorbia*, a native plant, which is very pleasant while the descending sap is very acrid, and much like the juice of common spurge. Now it is this descending sap that gives whatever is peculiar to any plant. It gives the in-

dividuality, or particular property. If a tree has a coloring matter, gum, starch, oil, tannin, or any other peculiar product or property, it is communicated by the *descending* sap. This forms the fruit. It is the sap descending, passed *down* in the latter part of the season, from the leaves, that forms the corn, and gives to it its nourishing property. My idea of the origin and formation of this new sap is a little different from that of the writers; or, rather, I should state it differently. The leaves of plants evaporate very rapidly. Some plants evaporate their whole weight, and even more, in twenty-four hours. And as the upward sap and downward sap flow at different seasons, I am inclined to think that the last is rather to be considered a new matter, not merely resulting from a change in the upward sap, by the function of the leaf, but that the upward sap is wholly passed off by evaporation, and that then the action of the root ceasing, that of the leaf begins,—and taking in oxygen and other constituents of the air, the downward sap is rather made anew in the leaf, from these new materials, and then passed over the plant. But I need not say anything about this, because whichever it may be, the effect on the plant is the same. It is the downward sap that makes the corn,—and this downward sap is made or qualified in the leaf, and cannot be in any other part, or by any other process. Now, therefore, if you cut off the top with the leaves above the ear, before the ear is ripe, you stop the growth of the ear, at that point to which it has attained. It grows no more. It had before ceased to draw any thing from the ground. And if left to stand on the stalk a fortnight, it will gain nothing, either in weight or nourishment, but will be exactly the same as if gathered on the day it was topped.—It may sweat or dry on the stalk, as it would in the crib, or perhaps better; but it *gains* nothing. This has been proved by weighing. Mr. Testall, my neighbor, weighed some of his corn that had been thus topped, and the same quantity on the same field that had not been topped, and found the grain of the topped stalks to be three bushels less in measure to the acre, than that which had not been topped, and the bushel four pounds less in weight, making over another three bushels to the acre. If this is correct, the gain in estovers is just balanced by the loss in the grain—and, of course, whatever the stalk is worth as a restorer of the soil, is the true loss by topping.

By thus weighing the topped and the untopped corn, an estimate by approximation may be made of the advantage or loss by the process of topping. And this is the question.

Mr. Brooks, of Princeton, Worcester county, in a statement made in the *New England Farmer*, Dec., 1851, apparently made with knowledge and care, puts the average for a crop of corn in this State at 40 bushels, the value 80 cents, worth of estovers seven dollars the acre. One, at least, or perhaps two dollars additional cost is incurred in cutting the stalk or topping and binding, per acre. This would make the value of the tops five or at most six dollars to the acre for fodder. Six bushels of corn more to the acre, at 80 cents, would be \$5.00 less 20 cents. If, by leaving the corn untopped, you gain so much corn, then there will be no advantage in topping. But if the increase of the corn is only a small part of this ratio, or suppose, even, it is nothing, is there not as much

gain by restoring the stalk to the exhausted soil, as by feeding it!

At any farm in this State, a cord of stable manure costs five or six dollars. Now by restoring the estovers of an acre, I believe you enrich the acre more than by a cord of manure. You restore nearly all that has been drawn from the soil by the growing crop. The ear, as I said, is drawn from the air, not the earth, and the evaporations of the plant are nearly pure water. If, therefore, the stalk is returned, and plowed in in the fall or spring, the ground receives back nearly the value it has given out. It receives the same *kind* that it gave, and I think more in amount of fertilizing matter than from a cord of stable matter. Of course, if this is so, there is a loss by topping, even without counting the loss of grain."

This is about what he said on topping, as near as I can tell it. It is curious to me. Now, whether the man is critically exact in considering the stalks to be of more value for manure than for fodder, is what I can't tell, though I suppose every one must work that out by his own experience and calculation. But it was the *way* of coming to it, that took me. In fact, I shall be obliged to think there is something in science, after all. For it was his knowledge of the science of the vegetable growth that led him along to reason as he did, and brought him right down to the point. There must be some benefit to a farmer, to have that sort of knowledge, that is certain. Don't you think so, neighbor Brown.

W. J. A. B.

Essex, Nov. 30, 1852.

REMARKS.—Certainly, certainly, friend B.; there is no more doubt on our mind on that point, than there is that tapping the stalk decreases the amount of grain. We have tried both ways, but continue to cut the stalks for two reasons. 1st, Because we get on the top stalk a large amount of the best fodder we cut on the farm. 2d, Because it is so much more convenient harvesting the corn.

OFFICERS OF BARNSTABLE COUNTY SOCIETY.—We are indebted to CHARLES H. BURSLEY, Esq., for the following list of the officers of the Barnstable Co. Agricultural Society, elected on the thirteenth of October last.

For President—CHARLES MARSTON, of Barnstable.
Vice Presidents—Enoch Pratt, of Brewster; Walter Crocker, of Barnstable.

Recording Secretary—Charles H. Bursley, of Barnstable.
Corresponding Secretary—F. W. Crocker, of Barnstable.
Treasurer—Frederick Scudder, of Barnstable.

Executive Committee—Matthias Hinckley, George Marston, Nathan Jenkins, Nathan Crocker, Frederick Parker, of Barnstable; Thomas L. Swift, Falmouth; C. B. H. Feenenden, Sandwich; J. G. Hallet, Yarmouth; William Howes, Dennis; George Copeland, Brewster; Obed Brooks, Jr., Harwich; David Howes, Chatham; John Kenrick, Orleans; Jas. H. Knowles, Eastham; P. G. Atwood, Wellfleet; Solomon Davis, Truro; Thomas Lothrop, Provincetown.

OLD APPLE TREES.—There is a bearing apple tree in Connecticut, alive and flourishing, at the advanced age of two hundred and fourteen years. It is of the English Pearmain variety, and was imported in 1638, by Gov. George Wylleys, and bore good fruit this season, on the "Charter Oak Place," now owned by Hon. T. W. Stuart, Hartford. Some of the fruit of this venerable tree was presented to the Connecticut Horticultural Society in

October last. For more than two centuries have the people been blessed with the fruit of Gov. Wylleys's regard for the welfare of men who should "come after him." Every man should set out fruit and shade trees, so long as he has the physical power to do so, that "future generations may rise up and call him blessed."—*Vermont State Journal*.

PAPERS FROM AFRICA.

Through the politeness of Mr. C. F. DENNETT, we have received the *Cape Monitor*, of the 15th September, and *The South African Commercial Advertiser*, of Oct. 2, both published at Cape Town, Cape of Good Hope. The *Advertiser* contains a report of a public sale of Merino and Thibet Rams, the Merinos averaging \$180 each, and the Thibets \$155 each. The *Monitor* contains a report of an agricultural Show and Fair at the Cape on the 14th Sept., at which matters seem to have been managed much as they are with us. The premiums on the horned cattle we notice were \$25 each.

The *Advertiser* contains an interesting letter, a few extracts from which we give below, which shows what is going on in a portion of the interior of Africa.

The Orange River Sovereignty, as you are aware, is situated between the Great Orange and Vaal Rivers. Sixteen years ago, before the "great trek" of the Emigrant Boers, it was a "trackless desert," a "howling wilderness"—"a land in which, although thinly populated by skulking broods of Bushmen, and by the starving remnants of nomadic pastoral tribes, which have been broken up by war and violence, no man permanently dwelt, neither was the soil any man's property;"—a land in which, for hundreds of miles, the eye was not greeted by the smallest trace of human industry, or by any vestige of human habitation—the wild and interminable expanse ever presenting the same appearance—that of one vast uninhabited solitude.

Such was the picture drawn by the well-known traveller, Capt. W. C. Harris, in 1836—7, of the country between the Vaal and Orange Rivers.

This vast country is divided off into farms—I forget the precise number, but I think somewhere about 1,500, the greater proportions of which are occupied and stocked.

The most striking feature in the country is the enormous extent of its flats, covered, after passing Smithfield, with thousands of head of game, comprising the springbuck, blebok, hartebeest, quagga, and wildebeest—and last, though not least, the "King of Beasts," that noble animal "which sweeps the desert with his rolling eye!" The pasturage of these plains, with the exception of what the Dutch term the "hooge veld," or "wildebeeste flats," which are covered with a sour wiry grass, is principally what is termed in the colony "gebroken veld," or a mixture of sour and sweet grass.

But what must before the lapse of many years raise this country to a very important position, is the fact that it is well adapted for woolled sheep.

The elevation of the country being very great, the winters are cold—the ground being generally covered with frost, snows frequent, and the waters—excepting the large running stream—frozen.

I have seen ice, half an inch thick, at two o'clock in the afternoon. This keeps the sheep in rather low condition in winter, but the length of staple of the wool is considerably increased thereby. As to the *quality* of the wool, the best proof is that "Sovereignty" wools have realized as much as 1s. 3 1-2d. in the London market. Upwards of *fifteen hundred* bales have been exported from the last clip, and taking each bale to be worth only £10, this will give a total of £15,000. No better proof can be required of the suitability of the country for sheep-farming.

SUPER-PHOSPHATE OF LIME.

Our space, this month, is not sufficient to admit of publishing the numerous letters we have received from those who have used the Improved Super-phosphate of Lime. In all cases where it was used preceding the spring rains, its results have been truly wonderful. On later crops since the rains of July, its effects are equally great. We have applied it to one field, on which are planted 60,000 cabbages, all of which are in a most flourishing condition, and fully equal those raised in the richest and oldest soil. This field was plowed in June, being the first time for many years. It was an old pasture, over-run with weeds and foul grasses and entirely out of heart. We applied 250 lbs. broadcast per acre of the Improved Super-phosphate of Lime, and after putting out the plants at the first hoeing gave 250 lbs. more, making in all 500 lbs., at a cost of \$12.50 per acre, and we state confidently that this will give twelve thousand merchantable cabbages per acre.

Those who have used the new manure on grass, wheat, corn, &c., are more than delighted with its effects, while for turnips the results are still more wonderful. It hurries their growth so rapidly, as to force them beyond the fly and ensure their perfection at an early date.—*Working Farmer.*

New Haven, August 24th, 1852.

PROF. J. J. MAPES:—Dear Sir—Allow me here to add one tribute of notice to the many you are doubtless receiving in behalf of that valuable manufacture with which you have to do, and which cannot fail to prove a valuable acquisition to the agricultural interests of our country.

As you well know, I desired you to send me one half ton of the *Improved Super-phosphate of Lime*, which was duly received, and applied to the various crops connected with horticultural operations. Having had an analysis of the soil, I was well aware of the results that would probably follow its application, nor have I been disappointed in my expectations; all that I could have expected or hoped for has been fully realized. While the applications which I have made were for improvement, yet to mark the result, I have not forgotten the value of experiment in leaving some portions of the crops without the benefit of the application, that I might more fully realize and exhibit its real value. I have applied it to corn, potatoes, beets, onions, carrots, beans, squashes, tomatoes, cucumbers, melons, cabbages, turnips, &c., &c., &c., including most other vegetables raised for the market, and in all cases I have been obliged to credit it with marked effects; and notwithstanding the drought, which has hitherto prevailed yet the *Improved Super-phosphate of Lime* has not failed to show its influence, thereby proving what most

desire to know, that it is readily soluble and suitable for the wants of plants. While I am unable to give you precise results, as the crops mostly remain unperfected in growth, yet it requires no long mathematical demonstrations to show where the liberal hand of its application was given.

But I need not enlarge upon its virtues; all who have used it, are doubtless aware of its influence, and those who have not, only need try it and be convinced.

Amid the improvements which are now gathering in behalf of agricultural interests, may the recent manufacture of Improved Super-phosphate of Lime take no unworthy place, and find no light esteem in the minds of all who greet agricultural interests with a cheerful hand; and while I bespeak for it a general reception in our agricultural communities, I feel I am doing nothing more than its merits will warrant, and successful cultivation demand. And may we hail with pleasure the dawn of that delightful day, when agriculture shall take science as her guide in the fields of labor, and make it the "Day Spring" of her energies, improving and enriching as effectually the mind as the soil. When this shall come, we shall no longer see hesitation in the use of *needful* fertilizers, but will behold each improvement as a new beam in the radiant light of a glorious morn.

Respectfully yours,

SOLOMON MEAD.

FARMERS' CLUBS.

We cannot urge upon our readers with too much earnestness the importance of forming clubs for the discussion of all matters relating to the farm.

Now is the appropriate time—suffer it not to pass unimproved. You will find amusement, improvement, and *capital*, in its deliberations, which you cannot now appreciate. Form the club, and be determined to take an active part in it, and you will find your thoughts ranging in new and delightful fields through another year. Meet at your own dwellings, and thus while you are interchanging civilities with each other, you will save all expense of hall hire, fuel and lights.

The following is a suitable form of a constitution:—

CONSTITUTION.

ART. 1.—This Association shall be styled *The Farmer's Club.*

ART. 2.—Its officers shall be a President, Vice President, Secretary and Treasurer, who shall be chosen annually by ballot.

ART. 3.—The President shall preside in all meetings of the Club, with power to preserve order, appoint Committees, and assign topics for discussion.

ART. 4.—In the absence of the President, all his powers shall be exercised by the Vice President.

ART. 5.—The Secretary shall keep a record of the proceedings of each meeting, which shall be read by him at the next subsequent meeting. He shall preserve all reports of Committees, and conduct whatever correspondence shall be ordered by the Club.

ART. 6.—There shall be at each meeting a dis

cussion upon a topic previously announced, which shall be commenced by four members designated at the preceding meeting by the presiding officer; and such other exercises as the Club shall deem proper.

ART. 7.—There shall be in the Club twelve Standing Committees:—One on Manures; Hoed Crops; Root Crops; Grain Crops; Grass Crops; Live Stock; Farm Buildings and Farms; Farming Tools; Reclaiming Waste Lands; Garden Fruits; Ornamental Gardening; Fruit and Ornamental Trees.

ART. 8.—Select Committees may be appointed as the exigencies of the Club may require.

ART. 9.—Each Committee shall make report in writing, from time to time, as the Club may order, and the reports so made shall be at the disposal of the Club.

ART. 10.—Any person may become a member of this Club by paying one dollar to the Treasurer.

ART. 11.—The Annual Meeting of the Club shall be holden on the first Monday of November of each year, for the election of officers; and all officers to hold over until new officers are elected.

For the New England Farmer.

CORN-COBS—BEES.

I have been a reader of the *N. E. Farmer* for the past year, and I trust that it has not been without profit. I have tried some of its directions, and particularly those relating to the management of fowls, and have realized a larger amount of eggs this year than any year heretofore; this I must attribute to the reading of the *Farmer*.

Now I want to ask you a question or two. And first, in regard to *corn-cobs*. Much has been said in our section for and against their use. Some say that corn ground with the cob is worth as much as its bulk in oats, while others say that cobs are entirely worthless.

Now I want to know your opinion in regard to this matter; whether there is any nutriment in them or not; if there is, what is the best manner of feeding them to cattle or swine? The next question is in regard to E. Jordan's Honey Bee Feed, a notice of which I send you. Now I would like to know how many lbs. of feed will make a pound of honey? Do you believe that the one dollar invested in this business may, as he says, be made worth \$50 twice told, or is it all a humbug?

A. D., 2d.

Dudley, Dec. 1852.

REMARKS.—We have no analysis of the cob, and can, therefore, only speak of it in general terms. Without possessing nutrient properties it may be used to advantage on other accounts. For instance, if you find it necessary to feed store pigs on corn entirely, for want of less concentrated food, such as potatoes or pumpkins, we have no doubt it would be better to grind the cob with the corn for them. But for fattening swine, the pure meal would be far better. A certain amount of *bulk* is as necessary as nutriment itself, to the healthy growth of the animal in all its parts. For cattle, fed daily with hay, the cob would be of little or no service; but deprived of a considerable portion of

the hay usually fed to them, the cob would be beneficial. There is considerable potash in the cob, and it may possibly answer some good purpose on that account. Fowls flourish finely, fed on cob-meal mixed with scalding water, as a change from dry food.

We know nothing of Mr. Jordan's mode of feeding bees, and of course cannot say whether it is a "humbug" or not. Persons do feed bees advantageously, with West India honey and the common molasses sugar, heated together and strained, at an expense of three or four cents a pound. Seven swarms of bees, to which we fed this composition, carried off *eighteen pounds* in two hours, but how much it added to our profits we had no means of ascertaining.

There is little doubt but that bees may be aided in their business when their pasturage is short, as is sometimes the case, by a mixture somewhat like the above. But probably not to any great extent, as all that they receive must pass through a thorough elaboration in their bodies, and cannot be greatly hastened, as one would a water wheel by raising the gate and letting on a stronger head of water.

FARMERS' WIVES.

We gladly give room to the following extract, and doubt not but that the sentiments therein expressed will agree with those of our readers generally:—

The farmers of this country occupy a position of honor and usefulness. They are the source of a nation's wealth and prosperity, and by their vote and influence can, at any moment, decide its destiny. Farmers' wives occupy a position of corresponding importance in our own country's history; they are and have been the mothers of the men whom our nation delights to honor, whose voice of wisdom and warning is heard in our nation's councils. Lebanon shorn of its stately cedars, would be her sad emblem, were our land bereaved of our patriotic and heroic men whose early youth was associated with rural scenes, with woods and streams, and the bird voices that fill the air with melody. But the sweet voice that stilled the cry of infancy, the kind hand that led them to the altar of prayer; the counsels that conducted them in the paths of wisdom, the influence that developed their moral nature—those were the pledges and presages of their future greatness. The wives of our farmers, whose thrift and industry have secured for their husbands a competency, whose intelligence is the light of the social circle, and whose piety is the guardian of domestic peace, are emphatically "the mothers of our men." A failure in the country—with all the opportunities of success, away from all the moral contaminations of a crowded city, amid the free refreshing winds, among all that is pure and poetic in nature, amid all that is suggestive of truth and beauty, and all that is bountiful and beautiful in agricultural pursuits and success—rightly to train up children, should awaken the voice of instructive warning. There may have been no failure in

accumulating wealth, none in making home beautiful and tasteful to the eye; but the failure has been where it is most fatal, in training the heart and directing the footsteps of childhood. There may have been lavish expenditure to gratify fashion and perverted taste, but little care to develop the intellect and train the heart. There may have been great expense to teach children to sing, to play and dance well, but none to make them useful, virtuous and happy. Hence the failure, and the need of warning. There is tendency in these days of wealth and luxury among our farmers, to imitate the ostentation of fashionable city life. We wage no war against refinement. We are not averse to the elegancies of life; but to train up our daughters only to shine in the parlor, to play the guitar and speak correctly the French accent, and our sons to despise the honest toil of the husbandman, to feel that they must aspire to a profession, if they would become men; this is a sin not to pass unrebuked. Our fathers, who laid the foundation of our nation's greatness, were the humble tillers of the soil; and many who have plowed the field and sowed the seed, have risen to guide the affairs of state, to hold converse with the muse, or to sweep with a Milton's hand the harp strings. Our mothers, whose names and heroic deeds are immortal, cultivated the domestic virtues, plied the loom and the needle, and made the garments of the men whose names are associated with the heroism of the past. We must look still to farmers' wives, who are blessed with children, for the men of strong frames, of iron nerves and heroic hearts, to accomplish our nation's destiny. Let them not be recreant to their high trust. If they fail, to whom shall we look for the men, and the women, that shall be worthy to steady the ark of God, and train the coming generation for usefulness in the blessedness in heaven.—*Anonymous.*

For the New England Farmer.

ON BARNs.

SIRON BROWN, Esq. :—Dear Sir,—You will please apply one of the enclosed \$2, to the payment of one copy of the *New England Farmer* for one year commencing January, 1853; and the remaining one to arrearages; and consider me a permanent subscriber while I live, &c.

And here let me ask another favor. Will you be kind enough to describe or refer me to the most approved barn for winter feeding 20 or 25 head of fat cattle or milch cows, as the case may be? Having in view a sufficient cellar room for storing roots enough for one feed per day for five months; cheapness and durability of construction, convenience and economy in storing and feeding; health and comfort of the animals, and last, the making and saving of manure. Location for the barn is level land on the west bank of the Ohio river.

J. H. COLLINS.

*Locust Lawn, New Albany, Indiana, }
Dec. 16, 1852.*

REMARKS.—Our correspondent will find a plan of a barn on page 272 of the *Monthly Farmer* for 1852, which we consider as perfect in its arrangements as any we have ever seen. The description is full and easily understood, and combines about all the conveniences we can suggest. If your

ground is level, make half the depth of your cellar below the surface, using what is thrown out towards wharfing up the drive ways and cellar wall. Have your cellar eight or nine feet deep, and arrange your leantos and horse stalls so as to gather all the droppings under one end of the barn, leaving the other end of the cellar for roots, implements, barrels, lumber, &c. This arrangement will leave the hay over the root cellar, and of course mostly away from the vapors of the manure. By an examination of the engraving, and a careful perusal of the remarks attached to it, you will readily study out the best mode of constructing a barn.

For the New England Farmer.

BIRDS OF NEW ENGLAND.

THEIR PAST AND PRESENT HISTORY....No. 1.

BY S. P. FOWLER.

There was but very little correct knowledge upon the subject of ornithology previous to the appearance of the great work of Alexander Wilson, which was first published in September, 1808. It is true that Catesby, Jefferson, William Bartram, and Dr. Barton in the southern portion of our union, had written upon ornithology, but some of these works were expensive, particularly that of Catesby, and were seldom seen; Jefferson, who copied from Catesby and Edwards, furnished us with nothing but a catalogue. Mr. Bartram, who was more complete in his history of our birds, described in his travels through North and South Carolina in 1791, two hundred and fifteen species, and Dr. Barton, in his fragmentary *Natural History of Pennsylvania*, has furnished us some information upon this subject. In New England, Dr. Belknap in his history of New Hampshire, and Dr. Williams in his history of Vermont, have each enumerated a few of our birds; the former being published in 1792, and the latter in 1794. But most of the knowledge of the natural history of our country previous to the nineteenth century, was to be found only in scattered portions, written chiefly by travellers, journalists and civil historians, who possessed very little taste for the study of the natural sciences. The descriptions of our animal and vegetable productions, by some of the early writers, are mere fables, and are laughable and ludicrous to us, in the extreme. One of the earliest works on the natural history of New England, was written by John Josselyn Gent, and published in London in 1672. It was a book not much larger than the New England primer, and furnished with plates, and entitled "New England Rarities." This compared with Audubon's splendid work on the "Birds of America," shews to the student in natural history, a greater contrast, than he had supposed this country, with all its march of improvement, could ever have furnished. We will now quote from the writings of several authors, who wrote upon the subject of our natural history in early times, and, who probably believed that what they had written was veritable truth, and not to be gainsayed. Our first quotation is from the *New England Rarities*, where the author is describing nothing more or less than our bull frog, and the reader cannot fail to notice, there is not one word of truth in his whole de-

scription. He says, "The Pond Frog, will chip in the Spring like Sparrows, and croak like Toads in autumn; Some of these, when they set upon their breech, are a *Foot high*; the Indians will tell you that, up in the Country, there are Pond Frogs as *big as a child of a year old*." Our author describes a bird, which he calls the Troculus, and says "it is a small bird, black and white, no bigger than a swallow, the points of whose Feathers are sharp, which they stick into the sides of the Chimney, to rest themselves [their Legs being exceedingly short] where they breed in Nests, made like a swallows Nests, but of a glewey substance, and which is not fastened to the Chimney as a swallows Nest, but hangs down the Chimney by a *clew like string a yard long* and when they go away, they never fail to throw down one of their young Birds into the room *by way of Gratitude*."

The above relation of the Troculus, is no doubt intended for our chimney swallow; and if we can credit any of Josselyn's description of it, we may notice that this bird, very early in the settlement of the country, forsook its natural abode in hollow trees, to seek the habitations of men, and the protection they afford. We are not one of those persons, who entertain the idea that this swallow hangs its nests in our chimneys by a string, as a sailor does his hammock, between decks, or that gratitude to the owner of the chimney in furnishing these birds with a breeding place, prompts them to leave behind them one of their own offspring. In point of fact, the chimney swallow constructs its nest of very small twigs glued together, and to the chimney by a gum, which the bird secretes from its mouth. This nest is small, and to the young birds crowded, and not being lined is hard and uncomfortable, thus inducing them to leave it, when only a few days old, and attach themselves by their sharp claws to the inside of the chimney. In this situation they frequently lose their hold, and fall down the flue, and perhaps flutter into the room. If we must be compelled to believe strange relations in regard to the habits of the swallow tribe, as related by the old writers on Ornithology, with our own observations to assist in guiding us, we should give a preference to those which relate to the torpidity of these birds in winter, at the bottom of our ponds immersed in mud and water.

There were a few birds, that early attracted the notice of the first settlers of our country. There were others, to which their attention had been called by the Indians, those close observers of nature. One of the birds mentioned by the old writers, was called by the aborigines the Wakon Bird, and is thus described. "The Wakon Bird, as it is termed by the Indians, appears to be of the same species as the birds of paradise. The name they have given it, is expressive of its superior excellence, and the veneration they have for it; the wakon bird, being in their language, the bird of the Great Spirit. It is nearly the size of a swallow, of a brown colour, shaded about the neck, with a bright green; its tale is composed of four or five feathers, which are three times as long as its body. It carries this fine length of plumage, in the same manner that a peacock does his. Capt. Jonathan Carver, the traveler through the interior parts of North America in 1766, says the Naudowessie Indians, caught several of them, when I was in their Country, and seemed to treat them as if

they were of a superior rank, to any other of the feathered race. Mr. Loskiel, a missionary of the United Brethren among the Indians of North America, speaks of the bird of the Great Spirit—or the Wakon Bird, and describes it nearly in the same language as that used by Capt. Carver. It is difficult at this time, to ascertain what these birds were that were seen and described by our travelers, in the Indian Country. They were supposed to exist up to the time of Wilson." The description of our King-bird, as given by the old travellers, is as follows. "The King Bird is like a swallow, and seems to be of the same species as the black martin, or swift; it is called the King Bird, because it is able to master almost every bird that flies. I have often seen it bring down a hawk." It would seem that the Indians observed the courageous and tyrannical habits of this bird, before the arrival of our ancestors, and gave it the name of Sachem Bird. Roger Williams, in his key to the Indian tongue, says "the Sachem is a little Bird, about the bignesse of a swallow, or lesse, to whom the Indians give that name because of its Sachim or Princelike courage and Command our greater Birds, that a man shall often see this small Bird pursue and vanquish and put to flight the Crow and other Birds, farre bigger than itselfe." The generic description of the King bird, as given by our old writers, is inaccurate, the description of its habits is more correct. The Humming Bird was very generally known by our ancestors, and early attracted notice, and their descriptions of it, are generally correct, with the exception of its size. In Ogilby's America, published in 1671, the author says, "The Humbird is one of the wonders of the country, being no bigger than a *Hornet*, yet hath all the dimensions of a Bird, and wings with quills, spider-like legs, small claws: for color, she is as glorious as the rainbow; as she flies, she makes a little humming noise, like the Humble-bee, wherefore she is called the Humbird." The Wild Pigeon is mentioned by most of our old writers, and they were very abundant in New England in 1640; Josselyn says, "The Pidgeon, of which there are millions of millions, I have seen a flight of Pidgeons in the spring, and at Michaelmas, when they return back to the Southward, for four or five miles, that to my thinking had neither beginning nor ending, length nor breadth, and so thick that I could see no sun, they joyn Nest to Nest, and Tree to Tree by their Nests, many miles together in Pine Trees. I have bought at Boston a dozen of Pidgeons ready pull'd and garbidge'd for three pence."

The Whip-poor-will was another bird which from its singular note, attracted the attention of our ancestors. It is well known, that it acquired its name Whip-poor-will, very early in the history of our country. The Indians called it muck-a-wiss, the note of the bird striking an Indian's ear and imagination, differently from what it did the English. There was a bird described by our old travellers in 1762, and said to be found in our woods, and called by them the Whetsaw Bird. Their description of it was as follows: "The Whetsaw is of the cuckoo kind, being like that, a solitary bird and scarcely ever seen. In the summer months, it is heard in the groves, where it makes a noise like the filing of a saw, from which it receives its name." This solitary bird of the cuckoo kind, above mentioned, was no doubt the little Acadian

Owl, and well known in Massachusetts. Audubon says it receives its name from the sound of its love notes, bearing a great resemblance to noise produced by filing the teeth of a large saw. These notes, when coming, as they frequently do, from the interior of a deep forest, produce a very peculiar effect on the traveller, who not being aware of their real nature, expects, as he advances on his route, to meet with shelter under a saw-mill at no great distance. In "Ogilby's America," published in 1671, we find our birds, called by him common, and peculiar, thus enumerated somewhat after the manner of Spencer in his Faery Queen.

'The Princely Eagle, and the soaring Hawk,
Whom in their unknown ways there's none can chalk—
The Humbird for some Queens rich cage more fit,
Than in the vacant wilderness to sit,
The swift winged Swallow sweeping to and fro,
As swift as arrow from Tartarian bow,
When as Aurora's infant day new springs,
When the morning mounting lark her sweet lays sings;
The harmonious Thrush, swift Pigeon Turtle dove,
Who to her mate doth ever constant prove,
Turkey, Pheasant, Heath cock Partridge rare,
The Carrion tearing Crow, and hurtful stare,
The long-lived Raven, the ominous Screech Owl,
Who tells, as old Wives say, disasters foul.
The drowsie Midge, that leaves her day lov'd nest,
And loves to rove, when day birds be at rest,
The Eel murdering Heron and greedy Cormorant,
That near the Creeks, in moorish marshes haunt,
The bellowing Bittern, with the long leg'd Crane,
Presaging Winters hard and Death of Grain,
The silver Swan, that tunes her mournful breath,
To sing the Dirge of her approaching death,
The Tattering Oldwives and the cackling Geese,
The fearful Gull, that shuns the murdering Piece.
The strong winged Mallard, with the nimble Teal,
And ill shape'd Loone with his harsh notes doth squeal,
There Widgeons, Sheldrakes, and Hamillies,
Snipe, Dippers, Sea Larks in whole millions see."

The belief that swallows became torpid at the approach of winter, and buried themselves at the bottom of ponds, belongs to the past history of our birds, being very generally believed by ornithologists previous to the nineteenth century. In our next communication we shall speak of the brumal or winter retreat of the swallow.

Danversport, Jan. 1, 1853.

S. P. F.

For the New England Farmer.

WARTS ON PLUM TREES.

Frequent complaints continue to be made by correspondents of agricultural papers, and others, of the black bunches on plum trees, and as many inquiries for a remedy. Cutting off the bunches and burning them in the fire is every where prescribed as that remedy, and more than thirty years of personal practice, and observation of the practice of others, enables me to say that remedy is effectual. It is easy and simple, though sometimes a little severe on the tree. It may be it is too simple, and that a compound drug of many foreign hard-named materials would be more attractive, the application of which would be ten times the labor that the ready use of the knife requires. If the depredation of the curculio could be as easily prevented as the black warts, plums would be vastly more abundant than they have been. The last season, however, my plums suffered but little, and my cherries much less than ever before from the bite of the curculio. I attributed this to the very frequent high winds that prevailed about the usual time that the plums and cherries get their wounds. High winds clear the atmosphere of mosquitoes and may partially do the same of the insects or bugs and millers that sting fruit.

Peach and cherry trees suffered much the past season by the great flow of gum. On examination of the bark about where the gum oozed out it was found dead, and the wood dead or affected under it. Whether the flow of the gum is caused by a worm or not I cannot tell, though it appears to me that irritation from this source affects it. Upon that supposition I use the knife, gouge or chisel to remove the dead bark with the gum, and leave the wood naked to the sound line of bark and wood; and if done thoroughly the gum ceases to flow—the wound becomes dry and is soon covered with the growing wood. I had a young, thrifty cherry, the Yellow Spanish, several years ago, badly affected and nearly girdled by dead bark, which I removed with the gum and to such extent that I expected to lose the tree. The gum ceased to flow and the tree soon healed over sound and has grown vigorous and large. No gum has till the past season made its appearance. On examination the same state of the bark and wood as formerly appeared—the same remedy applied, and thus far with the same good effect. Whether the cause be a worm, or a disease or cancer of the wood, so to speak, the free use of the knife appears to be the efficient remedy. On peach trees the effect of removing the dead bark and gum and leaving the naked wood to the air has had the same good effect, so far as my limited experience has gone.

RUFUS MCINTIRE.

Parsonsfield, Me.

For the New England Farmer.

NORTHERN SPY APPLE.

DEAR SIR:—In answer to your inquiries about the Northern Spy apple, I am not fully prepared to give all the information you desire; but as far as I have been able to test it, I am confident that it will do well with us in our northern climate.—The tree in the nursery is a very strong and handsome, upright grower, rather long jointed, but as it grows older the head thickens up, making it one of the handsomest trees grown. I have two hundred of them set out in my orchard now, five years from the bud. There can be no loss to any man setting an orchard of them, even if they should not meet his expectations in fruiting, as they are the handsomest growing apple tree I have ever seen, and the stocks would be worth more than any others, to work other kinds of fruit on, being so very thrifty. To have them fruit well, I think they want a very strong soil, with high cultivation. The specimens sent were grown upon scions set in young, thrifty Baldwin trees five years since, this being the second year they have fruited, bearing about one-half the quantity there would have been of Baldwins upon the same tree. The apple grown with us is much heavier and firmer and keeps better than it does grown in New York. I do not consider it in prime eating until May, and then I think it the best apple I have ever eaten. It will keep well until July.

Yours truly,

W. G. LAKE.

Topsfield, Jan., 1853.

OLD FARMER'S ALMANACK.—Number sixty-one of this old favorite is published for the year 1853. It is well printed and filled with useful and interesting matter, and interspersed with blank leaves, so that the farmer will find it exceedingly convenient. Published by Jenks, Nickling & Swan, Boston.

STEAMING APPARATUS

When hay is \$20 per ton, and all grains proportionately high, it becomes the farmer to adopt every measure to economize. We have already, this winter, spoken of the importance of cutting hay, straw, corn stalks, &c., before feeding it out, and we have thought the subject of steaming of sufficient importance to justify the expense of an engraving to illustrate the manner of doing it. The description we find in that excellent work, the *American Agriculturist*, published by A. B. ALLEN, N. Y.

In some respects steaming is superior to boiling; it depends considerably upon the amount of food to be cooked.

In boiling, the blaze is outside of the kettle and the food inside; it is, therefore, in continual danger of being burned and much injured, unless some one stands by constantly stirring it. This is not only troublesome and inconvenient, but often adds more to the expenses of cooking, in the time of the person thus employed, than under ordinary circumstances can well be afforded. Nor do we see how this is to be avoided, unless the kettle be made with false sides and bottom, allowing several inches space between them and the true, which space must be kept constantly full of water. This would nearly double the expense of the apparatus, require its being closely watched during the boiling, in order to fill the space between with water as fast as it evaporated; the process of cooking would also be slower in this method, as it would require more heat around a double than a single kettle to bring the water within to a boiling point.

If food is to be cooked, on a small scale, boiling may be cheapest; if on a large scale, steaming is not only cheapest, but infinitely more compact; for the former would require a very large, or several furnaces for different sets of kettles, whereas, the latter may be done with one small furnace, steamer, and pipe, as shown in the cut, with any reasonable number of vats or tubs surrounding, in which to steam the food. In order to do this, the

steam pipe must be made movable with a screw, flexible, or be composed of some material that when the food is cooked in one tub, the pipe can be turned and inserted into another. We have seen no less than five tubs holding 150 gallons each, surrounding a small steamer, all of which could be filled with food and cooked within twenty-four hours. Three tubs, however, are usually sufficient for a large stock, in which the food of the first may be cooking, that in the second cooling, while that in the third is being fed out. A single person may be able to oversee, and efficiently manage all these operations.

The furnace, steamer, and tub, are so plainly delineated in the above cut, that they need no explanation. In cooking potatoes and other roots, the tub should have a false bottom perforated with numerous small holes, and set resting on blocks from 3 to 4 inches above the true bottom. The steam pipe should enter the tub nearest to the true bottom. The steam is thus introduced between the two bottoms, quickly rises upward, and is evenly diffused through the whole of the food. While the cooking process is going on, the top of the tub should be kept down as tight as possible, so as to prevent the escape of any steam. In cooking grain or meal, the false bottom must be taken out and the tub filled with water, as the steam heats the water and brings it to a boiling point as readily as a blaze or hot coals around a kettle.

Steaming is said to do its work more thoroughly than boiling, as it is so insinuating, it easily enters and bursts all the minute globules in the grain and vegetables. Be this as it may, certain it is, that either process renders the food more digestible, and easier assimilated by the absorbing vessels, and therefore more economical.

The following table in the *Edinburgh Journal of Agriculture*, shows very nearly the increase of bulk of different kinds of grain boiled to bursting.

4 measures of oats increased to	7 measures.
4 " barley "	19 "
4 " buckwheat or bran "	14 "
4 " maize increased to "	13 "
4 " wheat "	19 "
4 " rye "	15 "
4 " beans "	5 1/2 "

Boiled food, especially in winter, is much more nutritious, if fed as nearly blood warm as possible. If quite cold, or, above all, if in the least degree frozen, we doubt whether it is so beneficial as if uncooked—grain and meal we are certain are not; for animals will eat the raw, cold, more greedily than they will the cooked. Stock fed upon cooked food will eat more of it than if uncooked, and lie down quicker to rest. Of course all this is better for them, as they will thrive faster, look finer, and do more work. It is particularly beneficial to give hard-working horses or oxen, just as much wholesome, cooked food as they can eat, soon after coming in at night. Toiling all day in the open air, man appreciates and knows well the benefit of a warm, hearty supper. Let him remember, then, that a warm mess and abundance of it, is equally beneficial to the animals which a kind Providence has given him as efficient aids in his arduous labor.

MILK CONVENTION.

The milk trade has now got to be an important branch of business; twenty to thirty thousand dollars worth being annually carried into Boston from a single town. Like all other business in the outset, this has been conducted somewhat loosely, and without those wholesome guards and regulations which every important business demands.

Milk is purchased and sold in very large quantities by the can, for a stipulated price, under the general supposition that the can contains eight quarts and no more. The can has, therefore, come to be a measure as much as the half bushel or peck. But upon an examination of these cans it is found that they vary considerably in their capacity, some containing a gill, and others a half pint, more than the quantity sold for eight quarts.

It is partly on this account, and partly on account of the low price at which milk is now sold, that those producing it have resolved to have a uniform standard of measure. In order to effect this desirable end they met in convention at Brighton, on Thursday, the 30th day of December, to take into consideration what ought to be done in the premises. A large number of highly respectable citizens assembled, and were called to order by Wm. Hobbs, Esq., of Waltham, and the meeting was then organized by choosing MANSUR W. MARSH, Esq., of West Cambridge, Chairman, and BENJAMIN WELLINGTON, Esq., of Waltham, Secretary.

At this meeting a business committee reported resolutions which were discussed and a portion of them adopted; and after an animated discussion the convention adjourned to meet at the same place on Thursday, the 6th inst.

At the adjourned meeting on the 6th, there was a much more numerous gathering than at the first meeting; there being delegates from nearly every part of the commonwealth and from New Hampshire. All persons present interested in the subject were invited to take seats and a part in the proceedings. The whole subject matter was dis-

cussed, committees were appointed to prepare business for another meeting, to petition the Legislature, to attend to the procuring of a hall, to advertise, &c. Great harmony of action and unanimity of views prevailed throughout the deliberations, with an earnestness and determination of purpose not surpassed by any political convention in the heat of a campaign.

The following resolutions were passed with scarcely a dissenting voice.

Resolved, That wine measure, that being the only legal measure, be adopted as a standard and uniform measure in the purchase and sale of milk, on and after such time as this convention shall determine.

Resolved, That a petition be presented to the legislature now in session for the passage of an act requiring that *all milk cans shall be sealed*.

Resolved, That wine measure, as a measure for milk, be adopted on and after the first day of April next.

A committee was then appointed to arrange, if possible, with the directors of the various railroads to take passengers to and from this convention at half price.

The convention then adjourned to meet in Boston on Wednesday, the 19th inst., at such hour and place as will be designated in the notice of the committee appointed to attend to that duty.

CONSEQUENCES OF COLD FEET.

"Life is warm; Death is cold"

If there be one subject that beyond all others demands the earnest attention of the American mother, that subject is the protection of the feet of her daughter from the cold and dampness of the pavement. We give it more than usual prominence, because the evil is neither understood nor regarded in any other light than a remote contingency not worth a moment's thought, when compared to the gratification of making an impression on her admirers, by what she imagines a beautiful foot.

Physiologists have proved by actual experiment with the thermometer, that the central heat of the body, or that of the blood as it issues from its starting point, the left ventricle of the heart, is 101 degrees; and that at the sole of the foot it is not more than 90 degrees.

The great and unchangeable law of the Creator that developes life, is warmth. The egg of the fowl only possesses latent life, till the warmth of the mother expands the germ, and gives the heart its first contractile or active force; without warmth it would never assume its organized form nor continue its action; this gives conclusive evidence of the truthfulness of our motto.

Before we speak of the influence of cold on the nerves of the feet, and its still more rapid effect on the circulation of the blood, through the action of the heart, let us consider the value of the great facts we have presented to the reader, viz., the natural decrease of the warmth of the blood in the vessels of the feet, as a probable means of permitting the ill effect of cold on these great central organs of life, the lungs, if not prevented by art.

It is conceded by all intelligent observers, that a violent chill communicated to the body, is very soon and sensibly felt in the lungs, and that pleuritis and inflammations of the lungs themselves, are the frequent consequences of such exposure. Now, it is known that heat or caloric has a tendency to equalize itself in all the various bodies in the universe: ice itself, only melting, by the inevitable necessity of imbibing heat, when exposed to it, according to this unchangeable law, it can only exist as ice during the summer months, by interposing between the atmosphere and it, substances possessing a known power of repelling heat. Thus it is preserved in ice-houses. When the earth is colder than the body, this law instantly begins to operate upon the feet standing upon it; and as the body is a producer of heat its safety is secured precisely in proportion to the vigor of health it possesses, or in other words, the rapidity with which its blood circulates through the lungs. It therefore follows that the feebler the circulation, the more unable the body is to part with its heat. If you clothe the body warmly, and thus prevent its warmth from transmission to the atmosphere, and interpose a cork sole between the sole of the foot and the earth, this transmission of heat is stopped, because cork, wool, silk and cotton are non-conductors of heat.

In a woman of ordinary size, there can be no reasonable doubt from the computation of physiologists, that half of her blood passes under the feet in two minutes at the least! so that it will be seen the conducting power of the damp earth must continually deprive the blood of its warmth. The effect of cold upon the nerves is yet more rapid than this. It is known to most persons, that instantaneous sneezing is often produced by standing on the cold hearth-stone or oil-cloth; and the speedy action of damp or cold feet on the bowels, is often painfully evident to many invalids. Assuming the body to be a producer of electricity (and it seems impossible to conclude otherwise,) that fluid is known to be subject to the same law as heat, i. e., to seek a constant equilibrium with surrounding objects. There can be no better conductor than the damp earth; all positively or negatively electrified bodies, not isolated or cut off by a non-conductor, seek an instant equilibrium.

This is well known to philosophers, and ought also to be equally so to every intelligent and rational being; therefore, it must be, that if heat and electricity be not the same thing, still the same danger must be incurred by too light clothing and shoes. Dr. James Murray has asserted, and he thinks proved, that cholera is rendered impossible, by isolating the feet by cork soles, and feeding and clothing the body, so as to keep up a high degree of electricity. All experience has proved that those persons most afflicted during both the epidemics which occurred in this city, were those who endured the greatest exposure to dampness, and ate the most watery and ill-cooked food; and what is more conclusive, that they were mostly attacked towards morning, when the atmospheric temperature was lowest.

Cork soles, of proper thickness, are an absolute non-conductor; and when the leather of the shoe is of good quality, they will prove sufficient for all the purposes of health till the month of December. By that time the pedestrian should accustom herself to a well-made boot with buckskin leggings,

made in all respects like those worn by males. Without such protection, she is never safe from the vicissitudes of an American climate, nor from the liability to disease which will soon destroy her gracefulness and beauty.

For the New England Farmer.

SOWING GRASS SEED.

FRIEND BROWN:—Last summer I inquired, through the *N. E. Farmer*, what should be done with land on which grass seed failed to come up in the spring. Immediately afterwards, I received a letter from Francis Brewer, of Springfield, Mass., kindly answering the question by giving the results of his own experience in the case.

And here I will acknowledge my obligation to him for his early reply, enabling me to try the experiment this year, so that I can now give the result for the consideration of others. But first I will transcribe a portion of his letter, believing it belongs to the public as well as myself, and therefore that he will excuse me for the liberty I take.

Says he, "The month of August is decidedly the most favorable time in the year for stocking land to grass seed,—first, you are more sure of a perfect catch of the seed, than when sown with spring grain, and your crop of grass will be free from the stubble which remains, and is unavoidably gathered in the first crop of hay succeeding the first process. It also furnishes an opportunity of applying those manures, or stimulants, for a succession of the hay crop, which it would be injudicious to apply to the grain crop; and again because you are secured against any loss of expenses by the crop of turnips, and these I consider important reasons; and I venture to recommend to you, that you plow your land as soon as practicable, have on your compost heap from 100 to 150 bushels of leached ashes, or 100 pounds sifted guano per acre, and have it spread evenly, and well harrowed in; mix 1 lb. of turnip seed with a sufficient portion of grass seed to go over the piece one way, sow the remainder of the grass seed in the opposite direction, then with a light roller or with a brush cover the seed, and I will warrant you success."

The above was received the 10th of 8th month (Aug.) and pursuant to the recommendations contained therein, I had 1½ acres plowed the 11th, on which we applied five and one-half cords of barnyard manure that had lain in a heap all summer, harrowed it in thoroughly, and the 13th, I sowed half a bushel of herdsgrass seed, half a bushel of redtop, 8 lbs. of clover, and 1½ lbs. of turnip seed and rolled it in. A crop of barley had been taken from the ground, and the seed that shelled in harvesting, came up and produced a good sward.

All the seed came well, and I found the turnips much too thick. Early in the 10th month we commenced thinning them, and pulled more than one-half of the plants, which gave a large quantity of valuable fodder for our cows. I think the fodder was worth more than the cost of thinning, so I have made no account of either. The weather being favorable, I thought it best to leave the turnips in the ground as late as it would answer, so we did not commence harvesting on this piece until the 20th of 11th month. We took off 142 bushels, or 125 bushels to an acre. The turnips were not large; from want of sufficient time to

grow in, but they were very good. The market price here is 25 cents a bushel, so the account stands thus:

Labor,—plowing, sowing and harvesting.....	\$13.00
Manure.....	15.50
Seed.....	3.13
143 bushels turnips, at 25 cts.....	\$31.63
	35.50

Leaving a nett profit of\$3.87

besides having a fair prospect of a good crop of grass next year, while on a part of the same field which was not plowed, scarcely any grass is to be seen. On that, I intend to sow grass seed next spring—a plan recommended by some people.

The result of this experiment is entirely satisfactory to me, and I confidently recommend others to try it whenever their grass seed fails in the spring; and my opinion is that it would be better not to sow it with grain, for there is always, on dry land especially, an uncertainty of getting a catch of grass seed. If I should try it again, however, and I intend to, I should not sow more than seven or eight ounces of turnip seed on an acre.

Will some one who knows give me the analysis of ruta-bagas, parsnips, sugar beets, and mangel-wurzel, or the value of each compared with hay?

L. VARNEY.

*Friends' Boarding School,
Providence, R. I., 12 Mo. 21st, 1852.*

REMARKS.—The analyses below were made, of the turnip and mangold-wurzel, by Sir Humphrey Davy, and of the sugar beet and orange globe mangold-wurzel, by Mr. Herepath, a celebrated chemist in Bristol, England.

Roots.	Quantity of Nutritive Matter in 1000 parts.			
	Mucilage or Starch	Sugar.	Gluten or Albumen.	Total of nutritive matter.
Swedish Turnips,	9	51	2	64
White Turnip,	7	34	1	42
Mangold Wurzel,	13	119	4	136
Orange Globe,	25½	106½	1.20	151½
Sugar Beet,	17½	126½	1½	145½

Stephens, in his Book of the Farm, states that the quantity of nutritive matter in the ruta-baga is, in the white turnip from 8 to 13 parts in 100, and in the yellow turnip from 11½ to 17; so that 20 tons of one crop may be in feeding as 30 tons of another, which is an important fact, and may account for the discrepancies experienced by farmers in feeding stock.

We can give no comparison of the value of hay with turnips with sufficient accuracy to be introduced here. In a trial at Whitelaw, in England, between turnips, oil-cake and corn, in fattening cattle, the turnips were found to produce one pound of live weight much cheaper than either of the other substances. If such be the case with oil-cake and corn, we can see no reason why turnips should not possess the same advantage over hay. We have similar results related to us in this vicinity, but our experience has not been sufficient to warrant the expression of an opinion.

NEW BUILDINGS.—We call attention to the article entitled, "That is my Home," and particu-

larly of those about erecting new buildings. After reading it, most persons will be convinced that it is better to expend money in planting trees, shrubbery and flowers about a dwelling, than to expend it in making a *showy house*.

For the New England Farmer.

INDEPENDENCE OF THE FARMER.

MR. EDITOR:—Everybody in America wants to be independent. We have lawyers, physicians, mechanics, ministers and farmers; all striving to obtain or secure independence; and all, in a good degree, feel satisfied with the result of their labors in this behalf. We glory in our political and religious freedom; all of us. Here, we are all equal, from the President down to the pauper; if, indeed, the down hill slopes in that direction, which is a question fairly debatable. But after all, there is no class among us so decidedly independent as the farmer.

Look at the minister! Does he dare give utterance to sentiments that he knows will be generally distasteful to his society? Does the lawyer want to displease his townsmen, on whom he may depend for a living? Or do the merchant and mechanic feel perfectly free, at the commencement of their business, when the good will of the community may be considered as a portion of their capital, to take decided positions on the unpopular side? There are many of these classes, to be sure, that feel as independent as the farmer; because, by success in business they do not feel the necessity of employing this *windy* capital, the breath of popular applause. So long as men see that their daily bread, in a good measure, depends on the esteem of their fellows they must be desirous of securing it. The mechanic depends in part, and principally, on his skill; and so of all professions. But they all depend also, in some degree, on the good will of others.

The farmer also, relies on his skill; but the opinion of his neighbor is not worth a groat to him, so far as his ability to live is concerned. He plants his fields, and the good Lord, who "sends his rain on the just and the unjust," makes no distinction. He waters the fields of the Whig, the Democrat, the Abolitionist, the Infidel, and the pious man, alike. The wildest fanatic in the country, by suitable tillage, may raise as good a crop as any one, and sell it as well. But let him attempt to live by preaching, as a merchant, or mechanic; how would he prosper? He would certainly be driven from the pulpit, and most likely starved from his shop. Professional men must study social laws. The farmer depends on the laws of nature. The former are always changing; the latter, never. Consequently, the professional man is often in a dilemma and hardly knows what to do, for fear he shall offend the popular taste or broach an idea not in fashion. The farmer says just what he pleases; for it never was yet discovered that it killed his cattle or rotted his potatoes. And the farmer has more leisure time than most mechanics or professional men. Or if he has not, it is his own fault. No farmer needs be a drudge. [a.] His flocks in the pasture and his crops in the field are growing while he sleeps. When the merchant or mechanic closes his shop, the income from his business is suspended. But the farmer's income

is always increasing. He relies on nature, who labors for him continually, and on nature's God who never slumbers.

If a young man wants to engage in business that will insure him in middle age the greatest amount of leisure time, there is nothing more sure than farming. If he has an independent turn of mind, let him be a farmer. If he wants to engage in a healthy occupation, let him till the soil. In short, if he would be independent let him get a spot of earth; keep within his means, to shun the lawyer; be temperate, to avoid the doctor; be honest, that he may have a clear conscience; improve the soils so as to leave the world better than he found it; and then if he cannot live happily and die contented, there is no hope for him. S. F., JR.

Lyme, Dec. 28th, 1852.

REMARKS.—[a.] We say so too. Even if he lacks capital to manage his farm matters as he would be glad to, he is out in the free sunlight, goes and comes as he will, sustains his health, and calls no man master. We thank you, friend "F.," for the utterance of these just thoughts.

For the New England Farmer.

GLANDERS IN HORSES.

MR. BROWN:—Having been a regular subscriber of your valuable farming journal from the commencement to the present time, I wish to inquire if you, some of your correspondents, or numerous readers, will describe the symptoms of glanders in the horse; also prescribe a cure, if any there is. Also the symptoms of horse ail with a cure. Also the best medicine for cleansing the blood of the horse, and you will greatly oblige a

Bridgewater, Jan., 1853.

SUBSCRIBER.

REMARKS.—The first symptom of glanders in the horse is a discharge at the nose. Eventually pus (matter) mingles with the discharge. If there is a discharge from both nostrils the glands within the under jaw will be on both sides enlarged, and spots of ulceration will probably appear on the membrane covering the cartilage of the nose—not mere sore places, but small ulcers, with the edges abrupt and prominent. As the disease progresses, other symptoms appear. The hind legs swell to a great size, and become stiff, and hot, and tender. The membrane of the nose becomes of a dirty livid color, and the animal loses flesh and strength every day. The disease is almost always fatal. Various remedies are prescribed, but we have little confidence in them. Turn the horse to grass, if in the summer, and let him enjoy a pure atmosphere, and if he is occasionally giddy give him a few globules of stramonium.

The glanders is the most dangerous disease to which the horse is subjected; it is also infectious, both to man and beast.

There is some similarity between the disease termed "horse-ail," and the glanders.

The best medicine for "cleansing the blood of the horse," is careful attention, proper feeding,

and demanding from him only a reasonable service in return. With these his blood will be pure, his spirits good, and he will yield you an annual profit.

For a full description of the horse and his diseases we refer you to Youatt on the Horse, published by SAXTON, N. Y., price \$1.25, or to one of Saxton's Rural Hand Books, on Horses, their Varieties, Breeding and Management in Health and Disease, by H. D. Richardson, price 25 cents. Or to Cole's Book on the Diseases of Animals, published by J. P. JAWETT & Co., Boston, price 50 cents. In these you will find full treatises on every thing relative to the horse.

For the New England Farmer.

ALUM.

The alum of commerce consists of sulph. acid, alumina and potash. Alumina is never found pure in nature except in the ruby and sapphire, which consist of crystallized alumina combined with some coloring matter. Alum is the basis of all clay soils, in which it is always combined with silex or sand. The purity of the clay used in the arts, depends upon the greater or less amount of sand combined with it. Clay has a strong affinity for water, and absorbs and retains it in large quantity, thus rendering the soil in which it abounds, wet and cold.

It is very adhesive. Its particles have a strong attraction for each other, rendering the soil firm and compact. Much force is required to plow or work it. The roots of trees and other vegetables penetrate it with difficulty. Hence a strong clay soil is both difficult to cultivate and unproductive. It requires sufficient sand mixed with it to separate its particles, and overcome their tenacity, so that the tender and delicate radicles of plants can readily penetrate them. In a sandy soil, the particles are so loosely attached to each other, and have so little tenacity, that water percolates freely through them, and sufficient moisture is not retained to supply the demands of vegetation.

A mixture of these two elements in suitable proportions constitutes the basis of all good soils. Different vegetables require different proportions of these ingredients. Some require more clay and some more sand, some love a moist soil and some a dry one. Clay has another property also, besides that of absorbing and retaining moisture, which is of immense importance to vegetation. It has a strong affinity for carbonic acid and ammonia, and when turned up by the subsoil plow, it rapidly condenses them from the atmosphere.

In light sandy soils, a certain amount of clay is always found, commonly from ten to fifteen per cent. A sandy loam contains from thirty to forty per cent. of clay. A clayey loam seventy to eighty per cent. The stiffest clay soils contain from eighty to ninety per cent.

It is often desirable to ascertain what proportions of clay or sand are found in particular soils. This may be done with sufficient accuracy for all agricultural purposes, by putting a portion of the soil into five or six times its weight of water, shaking it smartly, and pour in the mixture into a deep glass vessel or tube. A common lamp funnel, with one end set upon a ball of putty or clay, will

answer very well. Leave the mixture at rest in the glass. The coarse sand will soon be seen collecting at the bottom. The finer sand will form a second layer, and the clay the upper or third layer. By observing the amount of each thus deposited, we may obtain a sufficiently accurate notion of the proportion of each ingredient in the soil.

A good soil must have clay enough to retain the water, the carbon, the lime, the ammonia, and other aliments that minister to the growth of plants, so that they may be found and absorbed by the roots, as they stretch themselves among the particles of the soil, feeling after the kind of nutriment which they need. At the same time it must contain sufficient sand, to allow the surplus matter to settle through it, or evaporate from it, so that the soil shall not be too wet or too stiff. Different vegetables, as has been already remarked, require different proportions of these elements.—Herdsgrass is fond of a moist soil, containing a large proportion of clay, while clover delights in a mellow, loamy soil. Rye thrives best in a warm, sandy soil, while wheat requires a stronger soil, with a larger proportion of clay. Both require a good supply of lime. The art of mixing soils in proportions, suited to the crops that are to be put upon them, is one of the most important that can engage the attention of the farmer. Whenever Massachusetts shall establish an agricultural college, the study of this subject will demand its share of time and talent. The ancient Italians, as we learn from Virgil, understood that certain soils were suited to certain crops; but it does not appear that they knew how to supply the elements that were wanting, or to neutralize those that were injurious, by the addition of others, that would combine with them, and form useful, or at least innocent compounds. This is an art that belongs to modern times. It has received but little attention, as yet, in this country. Its importance will be more and more estimated, as manures become more expensive, and more difficult to obtain.

Concord, Nov. 9.

J. R.

OFFICERS OF COUNTY SOCIETIES.

The following is a list of the officers of the HAMPSHIRE, FRANKLIN AND HAMPDEN SOCIETY, for 1853.

President—PAUL LATHROP, South Hadley.
Vice Presidents—George W. Hubbard, Hatfield; William Clark, Northampton; Ellisha Edwards, Southampton; George Dickinson, Hadley; Christopher Wright, Northampton.
Treasurer—S. L. Hinckley.
Secretary—William O. Gorham.
Auditor—L. I. Washburn.

FRANKLIN COUNTY SOCIETY.

President—HENRY W. CUSHMAN, Bernardston.
Vice Presidents—Asa Howland, Conway; Zebina Stebbins, Deerfield.
Secretary—H. G. Parker, Greenfield.
Treasurer—A. G. Hammond, Greenfield.

HAMPSHIRE COUNTY SOCIETY.

President—ALFRED BAKER, Amherst.
Vice Presidents—Edward Dickinson, of Amherst; Linus Green, Hadley; Edmund Smith, South Hadley; Israel Towne, Belchertown; N. Austin Smith, Sunderland; Samuel Wells, Northampton.
Secretary and Treasurer—J. W. Boyden, Amherst.

LIME WATER FOR HENS.—Accidental Discovery.
 —During the last season, Mr. Joseph Wilcox, of this town, having occasion to administer lime wa-

ter to a sick horse, inadvertently left a pail of the preparation in his barn, which remained there for some months, serving as a favorite drink for his hens. He soon afterwards found that the laying of his hens was apparently increased to a considerable extent. Being convicted of the importance of the (to him) new discovery, he has, during the present season, kept his hens constantly supplied with lime water, placed in troughs within their convenient access, and the result was an increase in eggs of nearly four-fold as compared with previous experience. He is willing to share the benefits of the experiments with his neighbors if they choose to try it; and hence this publication. The newness of the discovery (though it may not now be new to all,) is claimed only as applicable to the mode of imparting the lime in this case—its use in another form for the same purpose, having been previously understood by many.—*Wayne Sentinel.*

For the New England Farmer.

THE CHESTNUT TREE.

GENT. :—Sometime since, I sent to the agricultural warehouse in Boston to get some chestnuts to plant, but failed to get them. I can get enough of them at the stores, and wish you, if you will, to inform me if those will answer to plant; how they should be kept through the winter to plant in the spring, and whether it would answer to plant them this winter, if I should catch the ground open. Yours, &c. N. J. THOMAS.
 Eden, Maine, Jan., 1853.

REMARKS.—The chestnut, both on account of its timber and the fruit it produces, deserves more attention than it receives. The nuts intended for planting should not be allowed to become thoroughly dry. Those having been kept in quantity in the stores would probably sprout. They should be kept slightly moist through the winter and planted in the spring. Nature plants them in the autumn and covers with a thick coat of leaves; but it is probable that large numbers of those spared by the boys and squirrels never germinate, for want of being placed under favorable circumstances of light and warmth. It is said that they need protection the first winter, as there is danger of their being killed by freezing. In transplanting, the next spring they require much the same attention as other trees, but without so rich a soil as is required for fruit trees. In Italy, chestnuts grow to the size of small apples, and are used for food by the peasantry.

At a farmers' meeting, in New York, Mr. Rice, speaking of planting chestnut timber, remarked, that he plowed up a tract of unproductive hill side, several years ago, and planted it with chestnuts, in rows four feet apart every way. The first sprouts coming up rather crooked and scrubby, he went over the field and cut them down close to the ground, which caused new shoots to spring up straight and vigorous. The trees are very thrifty, completely shade the ground, and grow more and more rapidly as the soil becomes strengthened by the annual deposit of leaves. So well satisfied is he with the experiment, that he is now placing

other worthless lands in a similar course of improvement.

Emerson, in his "Trees and Shrubs," says the chestnut tree is found on the banks of the Mousum River, in the county of York, Maine, a little beyond the 43d parallel of latitude, and thence southward, as far as Florida, and in the Western States. It is found in every part of Massachusetts, but does not readily and abundantly ripen its fruit in the immediate neighborhood of the sea.

Michaux says chestnut coppes are considered in France as the most valuable species of property; every seven years they are cut for hoops, and the largest branches serve for vine props; at the end of 14 years they furnish hoops for large tubs, and at the age of 25 years they are proper for posts and light timber. The chestnut grows well on rocky hills, and other lands hardly rich enough for cultivation.

MAN AND HORSE.

When a horse does little work, we give him less attention—when not worked at all, we know that mischief will result, unless he is well exercised. When a horse is hard worked we know it to be impolitic to load its stomach while suffering from fatigue. When a horse comes in from a journey, a groom knows that its health depends on its skin being freed from the dust and perspiration, and also that the animal can not be comfortable unless cleaned once a day. If its food does not agree with it, the groom varies it in quantity and quality or both. No sensible owner lets his horse drink while in violent perspiration, nor do more than rinse its mouth, but will let it drink its fill about an hour before its meals, neither allowing it to load its stomach with liquid either at meals, or when hard work is immediately to follow.

This is all sound physiological treatment, drawn from a watchful observation of the effects of a regulated diet and regimen on the health and capabilities of the animal. How differently man acts to himself. When he is streaming with perspiration and giving orders for careful attention to his horse, he will walk into a refreshment or even an ice-cream! His diet is regulated by his tastes and cravings; the quantity varies not with his exertion or labor, but with his palatability. His meals consist of dishes proportionate to the length of his purse. The times of eating depend on business, fashion, or anything but his physical wants. His drink also is taken according to his inclinations, or according to the society he mixes with, and quantity or quality vary *only* with his palate and means! Those who work least, generally fare the richest. The skin of a horse must be kept clean or disease ensues, but the horse's master is heedless of this, and when visited by disease, wonders how it happened! Surely man is the most inconsistent animal on earth!

SADDLES.—The clearest proof of the antiquity of saddles, says Beckmann, is the order of the Emperor Theodosius, in the year 385, by which those who wished to ride post-horses were forbidden to use saddles that weighed more than sixty pounds. If a saddle was heavier, it was cut to pieces. Sad-

dles in the fifth century, must have been very splendid; so much so that a prohibition was issued by the Emperor Leo I., in which it was ordered that no one should ornament them with pearls or precious stones.

OLD MIDDLESEX.

The annual meeting of the Trustees of this county took place at Concord, on the 5th Jan., 1853. They decided that the next exhibition of the agricultural society shall be holden at Concord, on the first *Tuesday* and *Wednesday* of Oct. next, it being the 4th and 5th days. This society heretofore has occupied but one day in its annual exhibition. The committee of arrangements were instructed to provide accommodations for ladies at the dinner table on the second day of the show. This is another new feature and a most commendable one, we think, in this old society. The difficulty has been heretofore, we understand, that no room large enough to contain more than the members of the society could be obtained. The Trustees propose now to purchase land, enclose it with a substantial tight fence, and erect buildings for the accommodation of the fruits, vegetables, flowers, household manufactures, and machinery and implements, where they may all be exhibited under cover. This will leave the spacious and beautiful hall recently erected in that town to be occupied for the dinner, where some five to seven hundred persons may be seated.

In addition to the usual exhibition, a *Spading Match* has been directed; the premiums offered are five in number, consisting of 5, 4, 3, 2 and \$1.

A new premium of \$10 will also be offered on a single team of one pair of oxen, driven only by those who have already taken the society's highest premium on plowing.

For the New England Farmer.

DOOR YARDS.

MESSES. EDITORS:—By your paper, I learn that the Hon. Josiah Quincy, Sen., is still at the good work of giving encouragement to agriculture, by addressing the farmers at a cattle show dinner; and in the same paper, I saw an article in reference to clean door yards. More than thirty years have elapsed, since I saw in one of Mr. Quincy's addresses at an agricultural dinner, the following paragraph, which will serve as his opinion at that time. If I do not use the precise words of the venerable author he will excuse me, as I accidentally saw the address while travelling in an adjoining State.

"In viewing the farm we will stop at the door; far be it from me to enter, for where neatness and economy reign without, the husband seldom fails to be seconded by his companion within. But how is the path? Is it a pavement inlaid with broken crockery and abandoned utensils of household furniture? Do the thistle, the briar and the worm-wood contend for the mastery along the fence!—Are the poultry roosting upon the window sills,

the geese strutting at the front door or the pig playing puppy in the entry? The proprietor of such an abode may call himself a farmer, but practically speaking, he is ignorant of the a, b, c, of the art, for the first three letters of the farmer's alphabet are neatness, economy and order.

Hardwick, Dec. 29, 1852. WALTER MANDELL.

For the New England Farmer.

ON PRODUCING FRUIT TREES FROM SEEDS.

This seems to many an uncertain business—besides they want a quicker way. Others are willing to take time to do anything the best way, if they could know what that is. Others still go in the beaten track, buy their trees to set of a nurseryman, and leave it for those who can afford it, to think and make experiments. While the pomologist observes the uniformity of Nature's operations, in every species and variety of fruit, leaf, blossom, branch and trunk; fruit, color, flavor and time of ripening, hardiness and productiveness; learning the characteristics of each class and kind—constantly inquiring for her laws and productions, and delighted with every new discovery, acts with her, and with safety, certainly and success. Now, Mr. Editor, for the gratification of this class, and the benefit of all, permit me through your columns to share with them the pleasure and profit I have derived, as a learner from Nature's teachings.

In past years, the country farmer used to select his best apples for eating and market, and make the rest into cider. The pomace was spread from which to raise a nursery. Of course, these seedlings were of the poorest quality. The trees might be hardy and good bearers, and grafting was resorted to, for obtaining choice varieties, by the most enterprising. Still, the best fruit was sold or used for eating, never sowed; and nurseries still raised from the pomace of the poorer kinds, budding them when small, became at length quite a business as the only way of securing desirable fruit. Not unfrequently, scions of different kinds were set in one tree. In towns near the market, (say Boston) more choice fruit was raised, and sometimes a fair seedling was allowed to stand and bear, and perhaps a new and valuable sort obtained, say a Porter, by chance. Now supposing (what I consider to be certain) that this seedling was from a good apple, perhaps partaking the nature of two kinds growing on the same tree or near each other, one earlier than the other and less acid, this would account for its difference in flavor, and time of maturity. Suppose another seedling resembling Baldwins in form and the habits of the tree, but fruit of a different flavor, could not this be produced from seed of a Baldwin apple, affected by another whose flavor it partook?

I have spoken only of apples; but I think the principle will apply to different species of fruit trees, standing in proximity, and in blossom at the same time. By mingling the pollen, the habits of the tree and flavor of the fruit may be affected, and thus while some of the original kinds, many of new varieties may be produced from the seed taken from orchards containing many kinds.

Let it be observed, no tree can contribute to produce seed different from itself. Good trees mingling can produce only good fruit. Two trees ming-

ling cannot produce more than one new variety. Sweet varieties cannot produce sour, nor can early apples produce late. Or different varieties of winter and sour mingling produce a variety of sweet or early. So it is easy to see why valuable new varieties of seedlings may be obtained from, or near our market towns and cities, and the great improbability of getting them from the pomace of the poorest.

Again, if as I suppose, seedlings far surpass engrafted trees in longevity, and are certain to have a uniform character, which one budded or engrafted may lack (by reason of difference between the stock and scion, especially when one is early and the other late,) there are at least two reasons favoring the seedling. If great improvements in the habits of trees are possible, probable, and as I think certain, by combining hardy with delicate trees,—the constant and large bearers with the sparse—those of rapid growth and early maturity with slow, late, &c., as well as the acquisition of new and choice varieties, it would seem to accord with the spirit of the age to attempt it, though like many other discoveries, it might displace existing operations.

I might show the analogy between this and stock breeding and the evidence that "these things are so"—not speculations, and give some thoughts I have had on ways of protecting trees from mingling, and of obtaining pure seed and choice varieties for nurserymen as a business which, if desired, I will give you in another article.

Before closing, I wish to say something about vegetables.

For some years, I have been trying to improve some kinds. The first attempt was with sugar beet. Finding the French seed grew more than half out of the ground, and that part was woody when ripe, (tough) of little value, I determined, and succeeded in three years to obtain a crop of equal weight, grown under ground, all white and tender with small tops. Next I set about a change in my carrots, which, though very large, were very tapering. I am much gratified with my late crops. They hold their bigness remarkably. I would like you to see some selected for seed when I dug them (as I always do) and their size a foot from the top; and to furnish seed, and one carrot from each of three kinds, Orange, Purple and White Belgian, from which to get a plate and exhibit in the store and in your journal, that Yankees might see the article from which the offered seed was raised.

Some years since, in pulling my English turnips, (raised from imported seed) though a great yield, they run quite too much to tops with dish-like crowns. Finding one only, with a small top and small root, shaped like two saucers put together, I preserved it for seed, and the next year sowed what I got from it, among my potatoes, then beginning to be affected with disease. They mostly died; but I got 75 bushels of turnips "true to the seed." I saved and set out 8 bushels of the most beautiful I ever saw. This was in Springfield. All who saw them admired them, and spoke for some of the seed, which I circulated freely at \$1 the pound. Tops barely enough to pull up the single root, not much bigger than a pipe-stem. They were good as handsome. All this goes to encourage me in selecting the best roots and employing the best means possible, for

obtaining the very best seed, from which to secure the reward for the best care and culture of the orchard, field and garden.

Yours, truly, BENJAMIN WILLARD.
Lancaster, Jan. 1, 1853.

VEGETATION OF THE ARCTIC REGIONS.

The soil is always frozen, and merely thaws during the summer a few feet below the surface. But the thawing is by no means uniform. In peat it extends not deeper than two feet, while in other formations, especially in sand or gravel, the ground is free from frost to the depth of nearly a fathom; showing that sand is a better conductor of heat than peat or clay, corroborating the observation of the accurate J. D. Hooker, who, after a series of experiments in India, arrived at the same conclusion. The roots of the plants, even those of the shrubs and trees, do not penetrate into the frozen subsoil. On reaching it, they recoil, as if they touched upon a rock through which no passage could be forced. It may be surprising to behold a vegetation flourishing under such circumstances, existing independent, it would seem, of terrestrial heat. But surprise is changed into amazement on visiting Kotzebue Sound, where, on the tops of icebergs, herbs and shrubs are thriving with a luxuriance only equalled in more favored climes. There, from Elephant to Eschscholtz point, is a series of cliffs from seventy to ninety feet high, which present some striking illustrations of the manner in which arctic plants grow. Three distinct layers compose these cliffs. The lower as far as it can be seen above the ground, is ice, and from twenty to fifty feet high. The central is clay, varying in thickness from two to twenty feet, and being intermingled with remains of fossil elephants, horses, deer, and husk oxen. The clay is covered by peat, the third layer bearing the vegetation to which it owes its existence. Every year, during July, August and September, masses of ice melt, by which the uppermost layers are deprived of support, and tumble down. A complete chaos is thus created: ice, plants, bones, peat, and clay, are mixed in the most disorderly manner. It is hardly possible to imagine a more grotesque aspect. Here are seen pieces still covered with lichens and mosses, there a shoal of earth with bushes of willow. At one place a lump of clay with senecios and polygonums: at another, the remnants of the mammoth tufts of hair, and some brown dust, which emits the smell peculiar to burial places, and is evidently decomposed animal matter. The foot frequently stumbles over osteological remains, some elephants' tusks measuring as much as twelve feet in length, and weighing more than two hundred and forty pounds. Nor is the formations confined to Eschscholtz Bay. It is observed in various parts of Kotzebue Sound, on the river Buckland, and in other localities; making it probable that a great portion of extreme North-western America is, underneath, a solid mass of ice. With such facts before us, we must acknowledge that terrestrial heat exercises but a limited and indirect influence upon vegetable life, and that to the solar rays we are mainly indebted for the existence of these forms which clothe with verdure the surface of our planet.—*Botany of the Voyage of H. M. S. "Derald."*

For the New England Farmer.

ON POULTRY.

MR. EDITOR:—I keep a few native fowls, expressly for the profit of the eggs; I raise no chickens to sell; and I profess no skill in raising chickens. As I am often inquired of whether I get eggs enough to pay the expense of keeping, I thought I would send you a fair statement of the expenditures and income of the year 1852, commencing January 1; and if you see fit to give it a place in your columns, each one may judge as to the profit for himself.

Jan. 1, 1852—32 hens, worth 25 cts. each.....	\$9.75
They consumed 29 bushels of corn.....	32.09
Do. 4 bushels buckwheat.....	2.00
Do. 14 bushels of oats.....	.67
Do. 7½ lbs. meal.....	.11
4 hens bought in the fall.....	.67

Making the expenses.....\$35.41

Income—No. of eggs sold, 363 dozen.....\$54.69

2 hens raised and killed......33

Hens on hand Jan. 1, 1853—40, worth 25 cts. each..10 00

Income.....\$64.93

Subtract expenses.....35.41

Actual profits.....\$29.52

Which bears a profit on each hen of 75 cents and nearly 6 mills. You will see that I make no account of interest on the hens I started with, and I give no credit for manure, which I consider very valuable on my land,—more than the interest on \$9.75. And I have given no credit to the hens for the eggs used in a small family. Eggs sell much lower in Berkshire county than in the eastern counties. I have sold the past year 143 doz. for 12 cts. per doz., and some others for 12½ cts.

Hinsdale, Jan., 1853.

J. ABBOTT.

For the New England Farmer.

CULTURE AMONG TREES.

In a recent number of the *Farmer*, I noticed an article speaking discouragingly of culture among fruit trees. I was surprised at this, because my own observation has been, that the keeping the ground light, and well pulverized about trees, even as far as their limbs extend, and occasionally dressing the ground with some fertilizing substance, improves their growth, and their bearing qualities. So fully have I been persuaded of this, that I have thought their products, in a series of ten years, would be doubled by so doing. I know that a large proportion of the apple trees on our farms, stand in the fields or pastures, where the grass grows about them, receiving no culture or attention whatever; and more than half the time, yielding little or no fruit. Some trees standing thus yield fruit in abundance. But as a general thing, those trees which are best cultivated, bear best, both in quantity and quality. So fully satisfied are the dealers of fruit in our markets of this, that they will readily pay from six to ten per cent. more, for fruit that grows on cultivated grounds.

That trees are sometimes injured by carelessly holding the plow, whereby the roots are broken, and the bodies barked, there can be no doubt. Such culture is not to be commended. This, I think, must have been the kind of culture condemned by your correspondent from Maine. I presume the same kind of usage, would be equally injurious to vegetables.

I know one orchard of forty Baldwin apple trees,

that yielded more than three hundred barrels of fruit of best quality, the past season;—and about the same quantity in the season of 1850. The ground about these trees has been kept in a perfectly pulverized state for a half a dozen years or more, and manured like a garden. Can any one doubt that the proprietor has found the reward of his labor, in the abundance and quality of his fruit?

The benefits of such culture is particularly seen, in relation to the *Danvers Winter Sweet*. When fully cultivated, it yields fruit large, fair and bright;—when left with the grass growing under and about the tree, the fruit is dwarfish, spotted, and oftentimes knurly. The same is true, to a great extent, in relation to the Baldwin, both of which, I have often observed. P.

Jan. 10, 1853.

REMARKS.—We fully agree with our intelligent correspondent in what he says above. Some remarks which we have made on the subject of cultivating orchards, were with the intention of cautioning persons against entering their orchards with large plows and heavy teams and tearing up the earth and roots, as they would those in reclaiming a meadow.

Our own practice is to cultivate where the trees are compact, and to dig around and manure those standing in pastures, once or twice a year.

ACKNOWLEDGMENTS.

From Mr. ASA CLEMENTS, nurseryman, Dracut, fine specimens of the Winter Green Sweeting, Mother Apple, and Jewett's Fine Red. The first is rather too dry—the other two apples of fine flavor and well worth cultivation if they are good bearers.

Also, later, a box of fine apples from Mr. CLEMENTS, of Dracut. With some good judges we have tasted the fruit and do not think his recommendations too high, and so stand aside and let him speak for himself. He says,

I send you six varieties of apples. No. 1. *Minister*, a well known variety in Essex County: with me, it is not strong and vigorous in the nursery, but is hardy in the tree, and produces enormous crops of fair and good keeping fruit.

No. 2. *President*.—The original tree is now standing on the farm of Capt. JOHN WHITE, (I think it is John) in Salem, N. H. It was in a bearing state, when Washington was inaugurated President, and was named for him. I have seen it full of showy fruit twice within a few years. The tree now looks venerable and healthy, and as though it might outlive the people of Pelham, and a large portion of "the rest of mankind." In the nursery, rather vigorous.

No. 3. *Mother*.—This variety I have once only, fruited, and these specimens are a portion of the crop. In my judgment it is one of the best apples extant, and should think from appearances quite prolific; though on that point, the short experience I have had will not enable me to determine with accuracy.

No. 4. *Jewett's Fine Red*, or *Nod-head*.—This ap-

ple, I have been informed is addicted to the naughty (knotty) habit of growing unfair for two or three years when it first begins to bear, and as far as my own experience will enable me to judge it sustains that reputation to the fullest extent, albeit it is a fine apple, and worthy of cultivation. Young trees are tolerably vigorous and form beautiful heads, well balanced, between the upright and horizontal.

No. 5. *Red Cheek*.—A local name, scarcely known out of Dracut; matures immediately after the Porter, Oct. and Nov., and fills a space that is almost a vacuum hereabouts so far as good apples are concerned. I had about three bushels which were the most beautiful in appearance, and I had almost said, in quality, of any apple on my farm. I certainly sold them better than any other, this season, except the *Early Sweet Bough*, which always commands a good price on account of its good qualities and early maturity. They grew on one side of an old tree grafted four or five years ago, with three other sorts, on other parts of the same tree. It grows well, and bears ditto; young trees strong and vigorous, and I regret that through negligence or some other cause, they have been permitted to dwindle nearly out of the nursery. They shall be renewed.

No. 6. Name unknown, a late fall apple; my father brought the scions from Vermont a few years since: It was there called *Red Cheek*, which name appears to be a *misnomer*, as there is seldom any blush upon them, except on specimens much exposed to the sun. Young trees hardy and pretty fair growers, and in my estimation, it is deserving a name and cultivation. Please make the best use of the single specimen I send.

ASA CLEMENT.

Dracut, Jan. 13, 1853.

For the New England Farmer.

DEATH OF WM. G. LAKE, ESQ.

Died in Topsfield, on the 10th inst., Mr. William G. Lake, aged 45 years.

Mr. Lake was somewhat extensively known, as a horticulturist and dealer in nursery trees. He had devoted his whole time and energies, for the last fifteen years, to the cultivation of fruit and fruit trees. He had spared no pains or expense to procure the best varieties for cultivation. He had made himself practically acquainted with the growing of trees, and of performing the various nursery operations.

For several years past, his tables at our agricultural and horticultural shows have not been surpassed by any other contributor.

He had, for several years, supplied the vicinity with fruit trees, and several parts of the commonwealth, the southern parts of New Hampshire, and even the inhabitants of California will soon be gathering fruit from trees sent out by Mr. Lake, and which were raised on the soil of Topsfield.

Mr. Lake has sold trees from 25 cents to 25 dollars apiece. He has left on his grounds, (ten acres) between twenty and thirty thousand worked fruit trees from one to four years old, on the bud, for transplanting, besides leaving the grounds supplied with standard trees, just beginning to bear fruit; various ornamental trees have had a full share of his attention.

The town of Topsfield is indebted to Mr. Lake

for the building up of quite a village, ornamented with a variety of forest trees and shrubbery, where fourteen years ago, but one single dwelling, and a tall pine tree, relieved the monotony of mossy stone walls that bordered the highway.

Mr. Lake has certainly left a growing and enduring memorial of his industry, activity and taste.

About a fortnight before his death, he met with an accident on Charlestown bridge, from which he had very nearly recovered, when he was attacked with inflammation of the chest, three days before his death. He leaves a wife and three children, who, for their great and sudden bereavement, have the deep sympathy of the public.

Topsfield, Jan. 14, 1853.

M. A. R.

MASS. STATE BOARD OF AGRICULTURE.

WEDNESDAY, JANUARY 12, 1853.

Gov. BOUTWELL in the chair. The proceedings of the last meeting having been read, the Secretary read a letter from the Hon. LEVI LINCOLN, brother of the lamented Col. JOHN W. LINCOLN, a late member of the Board, in reply to a letter of condolence from the Board. Also, a letter from the Worcester Society announcing the election of HARVEY DODGE, Esq., of Sutton, as a member of this Board as successor of Col. Lincoln.

A letter from M. VATTENHARE was read, acknowledging the receipt of certain agricultural documents from Mr. Walker, Secretary of State.

Mr. JOHN C. GRAY reported on orchards.

Mr. SPRAGUE, of the Plymouth Society, reported on the Barnstable and Bristol Societies.

Prof. HITCHCOCK reported upon the Essex County Society.

Mr. BREWER reported on the Worcester West Society.

Mr. LAWTON reported on the Housatonic Society.

Gov. BOUTWELL reported on the Hampshire, Franklin and Hampden Societies.

Prof. HITCHCOCK read a paper recommending the establishment of Farmers' Institutes throughout the Commonwealth, similar to the Institutes for the promotion of education. The following are the leading suggestions of the paper:—

1. A vast amount of knowledge concerning the principles of agriculture could be imparted to the farmers in every part of the State. It would, in fact, form an *ambulatory agricultural school*, where the young, especially, would learn very rapidly from the best masters.

2. It would give an opportunity to men well qualified, after looking at the chemical and geological constitution of the soil, to make suggestions to the farmers of the different districts as to improved modes of culture.

3. It would furnish a good mode of communicating intelligence to the farmers of discoveries and improvements in agriculture, of distributing new varieties of seeds, and making known new and improved breeds of domestic animals.

4. It would probably bring to light new animal manures in different parts of the State by the researches of the lecturers, and of the farmers after they were put upon the track.

5. It would awaken a deeper interest in agricultural pursuits, and give them increased respectability.

6. Opportunity might be given during the meetings of the Institute for visiting some of the best conducted farms and gardens in the vicinity, and thus witnessing the operations of scientific principles.

Mr. BROWN read a report upon the Education of the Young Farmer.

Mr. BREWER presented a report on laying down land to grass.

Mr. PROCTOR moved that the subject of electing a Secretary be now taken up.

Mr. WILDER, from the committee appointed to present the names of candidates, said he had no written report to make, but would state that the names of several gentlemen had been recommended from various parts of the State, which names he would report if the Board desired it.

Mr. FESSENDEN, of Sandwich, moved that the further consideration of the election of a Secretary be postponed until the next meeting of the Board, and that the present Secretary continue to act until another is appointed.

On motion of Mr. FRENCH, it was voted that when the Board adjourns, it adjourns to meet again on Tuesday, the 25th inst., at 10 o'clock, A. M.

Mr. LAWTON reported on Indian Corn.

Some arrangement was made in regard to the meeting of the several County Agricultural Societies.

Mr. PROCTOR, from the committee appointed to examine the *Progressive Farmer*, a work by Mr. J. A. NASH, Teacher of Agriculture in Amherst College, made a favorable report, and recommended its use as a reading book in common schools.

And at a quarter past 6, P. M., the Board adjourned to meet as above stated.

Hors.—Quantity in market at present time for sale, 150 to 200 bales; will not exceed the latter. Quantity in hands of growers, to come to market, will not exceed 1000 bales, making 1150 to 1200 bales, against about 1000 bales in market, and in hands of growers to come to market, last year at this time. The quantity exported since the 1st of September, will reach nearly 600 bales, purchased in this market, a large proportion of which was sent to New York, and shipped from that port.

The statement in the *Courier* 4th inst., and the Boston Shipping List of Saturday, is very wide from being correct, and will have a tendency to mislead both growers and consumers, if not corrected; (whether the statements referred to were made designedly or not the author can best answer.) The above statement is correct, and can be relied upon.

Sales have been made within the last week, of 125 bales at 19a20 cents, first sort. W. B.

The following remarks by the Hon. R. B. Hubbard, which are copied from the *Plow, the Loom and the Anvil*, are interesting inasmuch as they show the doctrine heretofore entertained in respect to the degree of intense cold fatal to the peach bud is erroneous. We have heard other New England authority stating that the peach bud out-lived last winter a degree of cold equal to 26 deg. below zero. We are however by no means inclined to believe in the opinion set forth in this article, that budding of itself enervates the health and vigor of the peach tree. A well-grown specimen of the peach raised by budding is quite as hardy, in our opinion, as a tree of the same sort from a pit. It is next to impossible that it should be otherwise. Some varieties are harder than others, but the difference in vigor proceeds from causes other than the mode of propagation.

PEACH TREES.

For a few years past we have been encouraged in the belief that we could raise peaches in Massachusetts—that we should not be always dependent upon New Jersey and Delaware for this most delicious of fruits. But the result of the last winter has terribly shaken our faith. I have never known such destruction among fruit trees of any kind. I have been in each of the New England States, and find that the remark is true of all.

A large portion of the trees, probably one-third, were killed outright. Of the remaining portion, a moiety came out unscathed, while much the larger part show signs of sickly life, here a bud and there a limb; of fruit there will of course be but very little. Many gardeners are discouraged, and say it is of no use trying to raise peaches in New England. Many years will elapse before we shall be permitted to witness such a crop of peaches as last autumn.

But I took my pen to submit some queries which have arisen in my own mind touching the culture of the peach.

It has been asserted by writers of distinction, and generally believed, that the peach bud would not endure a greater degree of cold than 12 deg. below zero. The correctness of this is disproved by last winter's experience. In this place, the mercury frequently sank below 12 deg., and three times, as low as 20 deg. Yet, there are some peaches this season. I have seen three trees, standing together on the sunny side of a dwelling house, which appear as healthy as ever, and are burdened with fruit; while nineteen-twentieths of the trees in town had not a blossom, and at least three-fifths were killed. In some places, trees standing on the north side of buildings were uninjured, while those on the south side were killed. In the hilly towns of Worcester county, also in York county, Maine, the trees have suffered comparatively little; while in the valleys of the Connecticut and Merrimac most of the trees are dead. I notice also that in the same locality the trees which have survived are those which have grown slowly, while those which have made rapid growth, have verified the adage, "soonest matured, soonest decay." Another fact I notice; the trees which survived are mostly natural fruit. In my garden were twelve trees of budded fruit; every one died. In the garden of a neighbor near by, with similar soil, were about twenty trees of natural growth, all of which are alive and doing well.

From these facts I draw the following inferences: the surest way of raising the peach is the natural way—from the stone. Like produces like in the peach almost as surely as in corn. The natural tree is hardy, even in cold New England, after bearing twenty years. The artificial is always delicate—seems an exotic—a hot house plant, whose life is as a vapor. The growth of the tree should never be forced. If the soil is rich, growth should be retarded, by placing underneath the tree gravel and sterile earth.

The observance of these two simple rules, I believe will insure us good peaches, and in abundance, even in Massachusetts.

What say you, Messrs. Editors, to this *radicalism*?

R. B. HUBBARD.

Sunderland, Mass.

U. S. AGRICULTURAL SOCIETY.

The Recording Secretary, ROBERT C. WALKER, Esq., has issued the following notice, which we take pleasure in placing before the public.

"The first Annual Meeting of the United States Agricultural Society will be held in the Smithsonian Institute, Washington City, on Wednesday, the 2d day of February next, at 10 o'clock, A. M.; the Officers of the Society for the ensuing year are then to be elected. The importance of strengthening in its infancy an Institution which has for its object the promotion of our National Agriculture, it is hoped will secure the attendance of a large number of members."

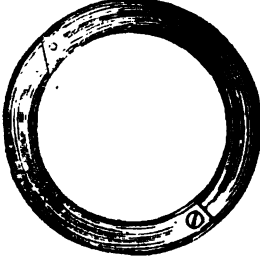
It is earnestly hoped that all the officers of our County Societies will become members of the National Association, by sending their names and the initiation fee of \$2 by the delegates from their respective Societies. This National Association needs now, especially, the countenance and support of those who feel the importance of a more enlightened system of agriculture throughout the country.

We will not doubt but that the government will before long lend its aid to the noble work begun; not by granting any special privileges to the farmer—that we do not ask—but by taking such a sure and liberal course as shall promote its own interests and strengthen its own hands. But as the people are always in advance of the government, it is necessary for the present to sustain the great national movement by individual effort.

VOCAL MACHINERY OF BIRDS.—It is difficult to account for so small a creature as a bird making a tone as loud as some animals a thousand times in size; but a recent discovery has shown that, in birds, the lungs have several openings, communicating with corresponding air bags or cells which fill the whole cavity of the body from the neck downwards, and into which the air passes and repasses, in the progress of breathing. This is not all; the bones are hollow, from which air pipes are conveyed to the most solid parts of the body, even into the quills and feathers. The air being rarefied by the heat of their bodies, adds levity. By

forcing the air out of the body, they can dart down from the greatest heights with astonishing velocity. No doubt the same machinery forms the basis of their vocal power, and at once resolves the mystery.

BULL RINGS.



"Put not your trust in princes," is good sound doctrine, and we wish to add, as somewhat more in our line,—*nor in bulls*. These animals may be docile and manageable for years, and then suddenly become dangerous, and destroy limb and life. A farmer in S. had a fine animal, which he had been in the habit of fondling in the pasture, and who never had shown any vicious propensities; but upon neglecting these attentions, one day, the bull suddenly turned upon and wounded him so that he lived but a short time. They should never be trusted. The insertion of a ring in the nose is not a cruel process when properly done,—not as much so as the heathenish practice of boring the ears of children. With a suitable punch, a little larger than the ring to be inserted, the cartilage of the nose may be perforated at a single blow, with very little pain. The ring may then be put in place and screwed together, and the wound will soon heal over. In this manner the most fractious animal may be managed with too much trouble.

MANURING FRUIT TREES.—Many fruit trees which have been considered valueless, may be recovered by being manured in fall and winter; and during warm days when the surface of the soil is not frozen, even stimulating manures may be applied, with impunity and covered with earth. Thus Peruvian guano, now applied, will be so divided through the soil by spring, as not to injure the young spongioles from the roots when they resume growth; whereas, if applied after the spring growth commences, the spongioles would be injured. Lime, ashes, and other manures appropriate to different soils and trees, may be applied in a similar manner.

Peach trees should be laid bare to the top of the roots at this season, and the crops of the next year will be materially increased, while the frosts destroy the ova of insects resident in the surface soil.—*Working Farmer*.

BURNING BONES.—We see some of our cotemporaries are recommending the burning of bones to render them easily reducible, by breaking before dissolving them in sulphuric acid. This is entire-

ly unnecessary, and causes a waste of the nitrogenous parts of the bone. A much better plan is to throw them into dilute sulphuric acid, and after a week draw off the super-phosphate of lime formed by the solution of part of the bones in the sulphuric acid, and break the bones—they are easily broken after such treatment, and may then be returned to the dilute sulphuric acid for further solution. We name this for the use of those who are too far from the large markets to procure phosphate of lime in any other form than as whole bones; but when the native apatite of Dover, N. J., or Crown Point, Lake Champlain, or the refuse bone-black of the sugar refiners can be procured and treated with sulphuric acid, its cost will probably be less than that of collecting bones, except in the vicinity of slaughter houses.—*Ibid*.

For the New England Farmer.

ANALYSIS OF SOILS.

MR. EDITOR:—A few days since, a young gentleman, son of a substantial farmer of this place, called on me to inquire, where he could go to learn how to analyze soils, and to witness practical illustrations of experiments of this kind. I was mortified, not to be able to name any place within *fifty miles*, where this information could be obtained. I told him that an experimental department in agriculture was getting under way in connection with the college at Amherst, where this kind of instruction would be dispensed; but whether students would be admitted for a short time, or on what terms they would be admitted, I was unable to say. I inquired of him, what attention he had given to agricultural studies. He said he had read Prof. Leibig's works, and several others,—and took your paper, and read it carefully,—and knew most of the elementary substances to be found in soils, but did not know their exact proportions, or how to ascertain them. He said he had much leisure in the winter months, and should be glad to devote his attention to it if he could find some one to direct him in so doing. If he could be informed what articles of chemical apparatus were needed to proceed in an analysis of soils, in a manner to be relied on, he should like to obtain them; as he knew several of his associates who contemplated farming as their employment, and would be glad to possess the information. I was pleased with the intelligent inquiries of the young man, and placed in his hands such books as I had at command, which I thought would assist him. But books alone will not be sufficient. He will need some experienced hand to guide his experiments, at least for a time. Presuming that he is only one of the many similar cases, within the limits of the circulation of your paper, I thought I would state his case to you; and hope you will be able to give such advice as will be of service. Perhaps, if you should mention his case, at the next meeting of the Board of Agriculture, some of the gentlemen there would be able to tell something about it. We have had much *talk* about agricultural education; it seems to me almost time to have something besides *talk*,—in the form of *experimental instruction*.

Jan. 3, 1853.

REMARKS.—Amherst, and the Mount Airy Institution, are the only places within our knowledge,

where the pupil can receive systematic, scientific teaching. When the Massachusetts Board of Agriculture gets through some of its preliminary business incident to a new organization, we trust the suggestion of our correspondent will be attended to.

For the New England Farmer.

FRUITS FOR NORTHERN CULTIVATION.

MR. EDITOR:—Annexed I hand you a list of fruit of such varieties as I have in a bearing state, all in field cultivation, without high brick walls or board fences to protect them. I have fruited every variety upon the list, and they all do well with me, with the exception of two varieties, which I have not so fully tested as I have the others;—those are the Northern Spy and Spitzenburg. I feel confident the Spy will do well with us in good cultivation; and if so, it will prove one of the best late-keeping apples, and should be extensively cultivated. The Spitzenburg is a very handsome; rich flavored and late keeping apple, but it has the appearance of being a poor bearer, but may do better as the tree grows older.

I have several other varieties of new fruit under cultivation, which I shall speak of hereafter, if you think the annexed list worth publishing.

Yours truly, W. G. LAKE.

APPLES.

Late Keeping Winter.

Baldwin,
Roxbury Russet,
Rhode Island Greening,
Danvers Winter Sweet,
Northern Spy,
Spitzenburg.

Early Winter.

Hubbardston Nonsuch,
Aunt Hannah,
Sweet Baldwin.

Fall.

Fall Harvey,

Porter,
Minister,
Gravenstein,
Alexander,
River Apple,
Luscombe,
William Hill.

Early Summer.

Williams' Favorite,
Early Sweet Bough,
Early Juneating,
Balsing Sweet,
Red Astracan.

PEARS.

Bartlett,
Beurre Bosc,
Flemish Beauty,
Beurre Diel,
Duchesse de Angouleme,
Louise Bon de Jersey,
Andrews,
Vicar of Winkfield,
Glout Morceau,
Winter Nellie,
Fulton,
Seckel,
Rosteezon,

Buffum,
Van Mons. Leon le Clerc,
St. Ghislain,
Golden Beurre,
Belle Lucrative,
Urbaniste,
Beurre de Aremberg,
Columbia,
Dix,
Tyson,
Beurre de Anjou,
Lawrence.

CHERRIES.

Black Tartarian,
Black Eagle,
Knight's Early Black,
Davenport,
Yellow Spanish,

Arden's White Heart,
Large White Bigarreau,
American Amber,
Early May Duke.

PLUMS.

Green Gage,
Red Gage,
Prince's Yellow Gage,
Imperial Gage,
Washington,

Lawrence's Favorite,
Jefferson,
Black Imperial,
Lombard.

REMARKS.—The above was sent us by Mr. LAKE on the 6th inst., and before the ink was scarcely dry, he was summoned from this, to that untried, world, "from whose bourne no traveller returns."

Mr. Lake was an excellent nurseryman, and full of devotion to his business, as these, perhaps the last lines he ever penned, will declare. Thus in the flush of manhood and life, one after another are called from this busy and anxious state to that to which each passing day is hurrying us on. May we seek from above help to apply our hearts unto wisdom, and be prepared for the summons, however unexpectedly it may come.

For the New England Farmer.

KEEP EXACT RECORDS.

MR. EDITOR:—Some remarks in your paper of the 1st inst. have led me to make the remarks which follow, and which if you deem appropriate at the present time, are at your service.

Farmers should record with more care than they are accustomed to do, the results of their own experience. When they raise a good crop, they should record the fact, and describe the soil and the mode of tillage by which so good a result was obtained. If they make a poor crop, they should make a record of this also, and the circumstances which led to it. The experience of the practical farmer is worth more than all the theories and experiments of the chemist in his laboratory. Experience at the bedside is worth more to the physician, than all the theories of the Professor in the lecture room. Theories may assert experience. They may give a right direction to the experiments of the practical man, and often enable him to arrive at his conclusions by a shorter path than he would without them. But experience, after all, must decide. In the living organization we do not always obtain the exact results from the application of chemical principles, that we do when experimenting upon dead matter in the laboratory.

This is true in the stomach. Medicines often fail of their expected results, because their action is modified by substances which they meet with in the stomach, or by the vital powers of the system. So in vegetables, the promises of the chemist are not always fulfilled. There are so many varying circumstances connected with temperature, moisture, and the constitution of the atmosphere for the time being, which are beyond our control, but which nevertheless, modify the results of chemical activities, that the promises even of a Liebig must be received with considerable latitude—a wide margin must be allowed for the record of the deviators from the rigid rule.

Theories can only give a general direction to experiment. Like theories in medicine and morals, they need to be corrected in their working by experience.

But the sciences of morals and medicine are not therefore useless. Far from it, they impart to us the knowledge of certain fundamental principles, which are of universal application, but which, in their application to individuals, require the modifying hand of experience. The case is precisely analogous in agriculture. The careful hand of intelligent experience is needed to modify the application of its theories. For this reason the man of mere science is not the safest teacher, or the surest guide. He may be an accomplished scholar, he may present plausible theories and fine speculations, but they may not be applicable in the circumstances under which it is proposed to apply

them. The man who is to meet the farmer in the walks of every-day life, who is to suggest to him safe and useful experiments, who is to assist his efforts, and correct his practical errors, who is to secure his confidence and be to him a guide and a friend, must be not only a man of science, but a practical man. He must possess a large share of practical sense, and have occupied a wide circle of observation. The mere Agricultural Chemist, fresh from the schools of Germany, would cost our farmers more by the fruitless and unsuccessful experiments he would set them upon, than all the advantage would be worth, that would result from his teachings. Our farmers would be disgusted with his ignorance of practical details.

That fine spirit that is manifesting itself at the present time, especially among our young farmers, needs to be fostered and encouraged. If it is directed by a skilful hand, it cannot fail to lead to good results. But if an unskilful hand attempt to give it direction, it will be more than discouraged. It will be changed to prejudice, against all science—which will retard for years, the march of improvement; like the prejudice which arose against the expensive and impracticable experiments of the gentlemen farmers of the last generation, and which has not yet died out of the community, but is still found opposing the efforts of the patriot and the philanthropist for the good of his country and his race.

It seems to me, that what is wanted at the present time, is that the spirit of improvement and enterprise should be encouraged and strengthened, and the farmers taught to unite their efforts, and concentrate their influence for their own and the public good. Prejudice is to be overcome, and a disposition is to be awakened and developed in some practical form, to secure for themselves and their children more and better instruction than they have hitherto enjoyed upon all subjects relating to their daily business. When a public feeling has been called forth, and a demand created for more scientific instruction—then the farmers will be prepared to sustain institutions that will afford them instruction of a higher character. But until a larger demand exists, it will be in vain to furnish a supply. Scientific instruction of a high grade will not be appreciated, and if provided before the practical men are prepared for it, it will only serve to put off to a more distant day the very object at which we are all aiming, viz., practical farming, guided by scientific knowledge.

REMARKS.—We commend the above suggestions to every reader, and especially to those in every State, who have a controlling influence in directing agricultural education. The first thing to be done is, to prepare the mind for a better system by the plainest and most practical teachings—the initiatory steps—and until that can be accomplished, all higher aims will prove worse than useless.

A MAGNIFICENT PLEASURE TRIP.—A prominent steamboat owner of this city, who has made an immense fortune in steamboating, has devised a novel, most liberal and magnificent plan for disbursing some of his gains. He proposes to rig in the most perfect style, a steamer yacht, now nearly

completed, furnishing her in the richest manner, at a cost of \$50,000 over ordinary ships of the kind. About the first of May he will take on board his sons and daughters and forty or fifty other guests, and sail for London, Copenhagen, Stockholm, St. Petersburg, Havre, Bordeaux, Lisbon, Gibraltar, Marseilles, Naples, Malta, and such other ports as may be desirable, staying a short time at each port, giving fetes and seeing the lions. The entire expense, which is estimated at more than \$200,000, will be borne by the projector. This is about the most extensive plan of a pleasure trip ever yet entertained, and when carried out (which it undoubtedly will be) will be very apt to give Europeans some new ideas of the outside barbarians of Yankeedom.—*New York Tribune.*

AUTUMN AND WINTER.

BY FRANCES GAGE.

The Autumn is going with its beauty so glowing,
And Winter o'er all things is casting its pall;
The rose-tree is fading, no longer 'tis shading
The arbor of love or the bright water-fall.

The dahlias are lopping, the ripe fruit is dropping,
The corn-leaves are withered and dry on the stalk;
The ring-dove is sighing, the grasshopper dying,
The fire-fly no longer enlivens the walk.

The forests are changing, the wild birds are ranging
To hunt out a home where the skies are more clear;
The stream deeply flowing, the chilly winds blowing,
All tell us that Winter, cold Winter is near.

Summer's sweets while we're tasting, away all care hasting,
The days of the peach and melon are o'er;
Then let us be trying, while Autumn is dying,
To lay up for Winter a plentiful store.

Work freer and harder, fill the barns and the larder,
Then give to old Winter, whene'er he shall come,
A welcome most willing; we'll heed not its chilling,
If there's warmth round the hearth-stone and plenty at home.

But while we are cheerful—no cause to be tearful,
Let us think of the children of Sorrow and Wrong;
And give from our treasure, with no stinted measure,
Of the good gifts of Heaven to help them along.

Ohio Cultivator.

For the New England Farmer.

PEACH BORER PLASTERED UP.

Having in my garden a very vigorous peach tree, and observing that it was very much affected by borers, especially in the forks of its limbs, I began to cut them out. Still I was afraid that this operation, to be performed in many places, might injure the tree, and as I had some very fine, almost pure white clay prepared, I plastered the limbs of the tree with it, and closed, when the plastering cracked in becoming dry, the cracks by rubbing them over with a painter's brush, dipped in water.

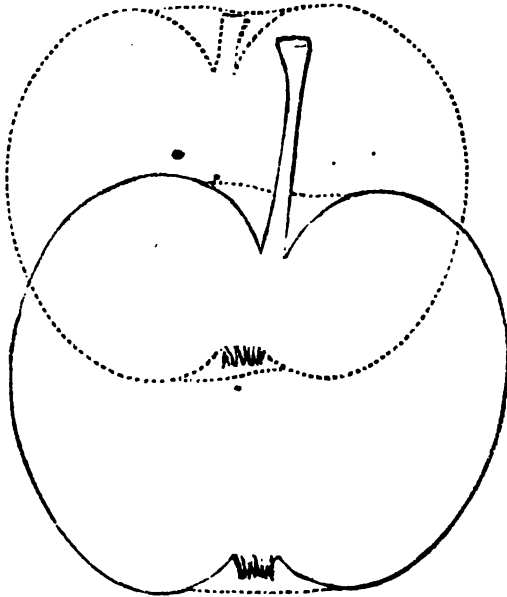
The plastering became hard enough to withstand the effects of rain for several weeks, after the elapse of which all the borers were dead. The wounds caused by them, healed quickly over, and the tree is as healthy as it can be.

This experiment corroborates the fact, relating to the destruction of the apple borer, communicated in No. — of the *New England Farmer*.

CHARLES SIEDHOFF.

THE GARDEN ROYAL APPLE.

The first outline below, that with the short stem, is a good outline of the Garden Royal Apple. The fruit is below medium, roundish-flat, dull, greenish, russet yellow, mostly covered with dull, deep red in the sun, with numerous large, light red specks, stem short, slender, in a medial cavity; calyx medial, open in a broad, shallow basin; flesh very fine, tender, almost melting, crisp, scarcely an apple superior to it in point of flavor. Fit for use in September and October. Moderate grower and great bearer. Every garden should have a tree or two. Rather small for market. It originated, we believe, in the town of Sudbury, near Boston, and is produced there now in perfection.

**THE LONG STEM APPLE.**

This apple is excellent for the dessert or cooking from the first of September to the last of October. It is a good and constant bearer. Originated in East Bridgewater, in this State.

The fruit is large, medial size; flattish round; pale yellow, brown full in the sun; dark specks and patches; stem extremely long, slender, in a broad, deep cavity; calyx large, rather open, in a broad and shallow basin; flesh white and tender, juicy, of a rich, mild, delicious, sprightly and aromatic flavor.

FARMING IN THE EXTREME EAST.

Some people, in Massachusetts, seem to think that if you go as far "down east" as Kennebec, you have arrived at the extreme point of the Agricultural kingdom, beyond which no dependence can be placed on cultivated crops; if they continue on as far as Penobscot, nothing is to be found there but Iceland moss struggling for existence on cold blue clay; and if they should dare proceed to the St. Croix, and thence follow up the line that separates Maine from New Brunswick, as far as the mouth of the Aroostook, they would have to encounter granite boulders and perpetual ice quarries all the way. There is a great mistake in

this matter, and we have often wondered that our neighbors just west of us should remain so strangely ignorant, as most seem willingly to be, of the soil, climate and agricultural capacities of this very "down east" State of Maine.

We recollect that three or four years ago last summer, we passed leisurely with our own horse and carriage along the eastern line of our State from Eastport, through Calais, by the State road to Houlton; and we were pleased to notice in most places, the excellent quality of the soil, and the exuberant crops that were growing out of the bosom of the earth. Grass, grain of all sorts, potatoes and other vegetables were superior to anything of the sort we ever saw in Massachusetts. The trees of the forests through which we passed were larger than can be found elsewhere in New England. In the course of our ride, one day, we remember we came to a spacious opening, and our eye rested upon a large, white edifice that we took at first for a great meeting-house. On approaching nearer, and inquiring for the use of the building, we ascertained that it was a barn. Its piazzas, its neat finish, and its ventilators on the roof, resembling towers, gave it the appearance of a comely church. It was on the farm of Samuel J. Foster, formerly of this city, whose neat and comfortable mansion house was on the opposite side of the road. We halted to see an old neighbor. His location is in Weston, a town named for Judge

of such successful agriculture is equally complementary to the scientific skill of Mr. Foster, and to the fine capability of our State as a farming country.

Memorandum of crops from thirty-six acres of land, in the town of Weston, in Maine, cultivated by Samuel J. Foster.

30 tons of hay; 667 bushels oats; 186 do. wheat; 97 do. buckwheat; 40 do. corn; 17 do. peas; 947 do. potatoes; 812 do. carrots; 21 do. turnips.

The average of oats was 67 bushels per acre; of wheat, 32; of buckwheat, 56; of carrots, 1008; of potatoes, 750.

Mr. Foster remarked that he did not think the whole expense of the buckwheat, when threshed and in the granary, exceeded 12 1-2 cents per bushel.

I think it may be questioned whether any of our Western States afford a more successful sample of agriculture than this. Yours truly,

T. CUSHING.

P. S. I also learn from Mr. Foster, that he dug from a field on the bank of the Molunkus river, a carrot of the orange kind, measuring four feet and eight inches long."

That carrot, we suppose, is cousin to those of the same family which, in Illinois, grow down in the earth till they come through on the other side in the Chinese empire. Seriously, we ask any rational man where he can go in Massachusetts, or any other New England State, and with the same labor obtain larger and better crops than accrued to Mr. Foster the past season? Let this *prejudice* against "down east" be done away.—*Gospel Banner*.

LEGISLATIVE AGRICULTURAL MEETINGS.

SECOND MEETING—TUESDAY EVENING, JAN. 25, 1853.

The second Legislative Agricultural Meeting of the season was held on Tuesday evening, at the State House.

The meeting was called to order by B. V. FRENCH, of Braintree.

Mr. BROWN, of Concord, moved that a committee of five be appointed by the chair to nominate a permanent list of officers and prepare business for the meeting.

The motion was carried, and Messrs. BROWN, HOWARD, of Boston, DODGE, of Worcester, PAGE, of New Bedford, and MERRIAM, of Tewksbury, were appointed that committee.

They subsequently reported the following gentlemen to constitute the Executive Committee, whose duty it is to secure chairmen for the meetings, prepare rules, and select subjects for discussion—and they were unanimously chosen: B. V. FRENCH, of Braintree, J. H. W. PAGE, of the Executive Council, JOSEPH SMITH, of the Senate, J. W. PROCTOR, of Essex, and NATH'L TRULL, of the House. Mr. SMALL, of Truro, was subsequently added.

Mr. M. P. WILDER, of Dorchester, was invited to take the chair, which invitation he complied with.

The Executive Committee not having time for action, a topic for discussion was called for, whereupon,

Mr. MERRIAM, of Tewksbury, suggested for this purpose, whether some change could not be made in the method of bestowing premiums by agricultural societies, which would enable them more effectually to attain the objects for which premiums are designed.

Mr. MERRIAM remarked in explanation, that he conceived that the present modes of bestowing premiums failed to accomplish their true aim, viz., *improvement* in agricultural products. For instance, take the milch cow. The first premium is awarded to the best animal, without regard to the place where she was raised, provided she had been kept in the county for a period of perhaps six months. She may not be owned by a breeder, nor kept for the purpose of breeding, and was bought, perhaps, at an extravagant price, to please the fancy of some rich gentleman rather than to improve our stock of milch cows. Her competitor is a cow raised in the State, and by a farmer who rears his own stock; but the former gets the premium. Is this course calculated to improve in the least our stock of milch cows? He did not suppose that the object of premiums was to induce rich men to purchase the best cow that can be found in the State or country. The same remarks, Mr. Merriam continued were also applicable to working oxen. In his (Middlesex) county, the regulation is that they must have been owned in the county six months.

Mr. MERRIAM wished to have the intellectual faculties of the farmer stimulated, as well as his hands, and for this purpose would have the control of agricultural societies placed entirely under his control, and have him draw up the reports, make the addresses, &c. He was confident that it would prove of great benefit, and be a decided improvement on the present method.

Mr. SETH SPRAGUE, of Duxbury, considered it a matter of some difficulty to ascertain how to improve our neat stock, owing to the variance of opinion which exists in regard to the superiority of foreign and native blooded cattle. As to milch cows, our native cows carry off the premiums as often or oftener than the imported ones. He thought farmers generally, paid too little attention to sources from which their cattle spring. They have no criterion, and when they purchase cattle are guided by no particular reason in making a selection, but usually judge of an animal by its general appearance. We replenish our stocks of cattle generally from the droves that come from Maine, Vermont and New Hampshire. Hence, until the farmers of Massachusetts rear their own stock it will be vain for us to talk of improving either our milch cows or our oxen. We may select good cows, take them to the shows, and get premiums,

but when the cow dies there is an end to her superiority, if she has left no progeny behind her; nor even then, unless care has been taken in the selection of the male to propagate from. And in order to raise good stock we must have some standard. If there is all sorts of blood in an animal it will be impossible to tell what the character of its issue will be. It is all hap-hazard.

Mr. J. Brooks, of Princeton, offered some remarks in regard to the breeding of cattle. He said he could in time produce any characteristic in an animal that he wished, and that to any desired extent, and with perfect certainty—as color, shape, for beef or for milk, and a certain quantity of milk. For the last twenty years he had not failed in these matters. But he could not go beyond a certain limit; and he was skeptical whether any man could get above a certain maximum; therefore, if we would breed for any particular purpose, we must have that purpose in view. There should be a particular state of feeling between both animals in order to propagate with certainty. In Europe great attention is paid to this matter and it will be found to be of great importance, for if wished, anything can be propagated that may be desired.

He thought there was one thing agricultural societies were deficient in, and that was a method of determining the comparative value of milch cows, exhibited at the shows. The cow that gives the most milk gets the premium, while another alongside of her that weighs more, and is really the best cow, gets nothing. The weight of the animal, the amount of food it consumes, and the quantity of milk yielded in proportion to the cost of keeping and the live weight should be accurately ascertained, in order to fix the actual value of the beast.

Mr. Dodge, of Sutton, stated that in Worcester County premiums were awarded only for such animals as were raised in the county, with the exception of bulls and boars, that may be brought in with a guarantee that they shall be kept for the improvement of our stock. They had been breeding from imported stock, but could not succeed with the females of either Devon or Ayrshire blood, but had with half bloods. He had tried a cross of the Devon with the Durham, but found it a very undesirable cross. He was entirely satisfied that unless some standard could be obtained, it would be utterly useless to offer premiums so long as foreign stock is permitted to be brought in.

Mr. Wilder, of Dorchester, submitted a few remarks in relation to the importance of having pure blood to breed from. By particular attention to this on the part of the male, we may be sure of great advancement.

Mr. Brooks, of Princeton, desired to know what number of quarts of milk it required to make a pound of cheese. He knew of two dairies supplied by Durham cows, where it took about nine pounds

of milk to make a pound of cheese. He desired to know how it was with other dairies, but no response was made at this point.

Hon. AMASA WALKER, spoke on the subject of breeding cattle. He said one fact was not generally taken into account in relation to imported stock. He believed it was impossible to raise Durham or Devonshire cattle in this country. There is a radical difference between our climate and that of England, which he believed changed the characteristics of every animal imported from thence. We must depend on a truly Americanised stock. He had some very superior Durham cows, raised in this country, and unsurpassed by any others he knew. But he had a little native breed cow, (what breed he could not tell) that was really a more profitable animal than the Durhams, considering the cost of keeping her and the quality of her milk.

Mr. HOWARD, of Boston, rose to respond to the inquiry of Mr. Brooks, of Princeton, in regard to the quantity of milk necessary to make a pound of cheese. He stated that no fixed rule could be adopted owing to a variation in the quality of the milk. That milk which is lightest, is the richest. In New York it is assumed that ten pounds of milk, will make one pound of cheese, or one pound of butter. The quantity of milk usually allowed in England, for a pound of butter, is twelve quarts. But that milk which gives the most butter, sometimes does not give so much cheese.

Mr. HOWARD also replied to the remarks of Mr. WALKER, in regard to breeding imported cattle. He did not perceive the distinction which had been drawn between native and foreign stock, for we have no native indigenous breeds among us; they were all originally imported. The first cattle brought to this section of the country, came from the southern part of England, and one Devon brought over to Connecticut, gave rise to that numerous breed known as "Farmington reds"; and any one who has an eye for stock can see that they bear to this day a striking affinity to the Devon cattle. If these cattle have retained their affinity to the Devon breed for 200 years, are we justified in saying that we can never breed Devonshire cattle in this country? They have been subjected to no system, and if we adopt an enlightened system of propagation we certainly have every reason to believe that Devons can be raised as well in this, as in their native country. In New York, where the speaker had had considerable experience, the Devons have greatly increased, and instead of receding from the Devon standard, have gradually conformed more and more to it. He believed that the fault in rearing cattle, was in the man, and not in the animal.

Dr. REED, of Pittsfield, wished that premiums should be awarded only to those farmers, who direct particular attention to *breeding* a good cow,

and not give them to men who happen by chance to have a good animal in their possession. In regard to competitors for prizes for crops, he would require them to make a definite statement of the mode of tillage, the kind of soil, what crops had preceded it, the quantity and kind of seed that was sown, &c.

Mr. WALKER replied to Mr. Howard, stating that he knew very well that our neat stock originally came from England, but that he considered stock, which had been in the country, for two hundred years as thoroughly acclimated, naturalized, and Americanized, and fairly entitled to be called native.

The hour of 9 having arrived, the meeting adjourned.

PRACTICAL FACTS FOR PRACTICAL FARMERS.

Under this head Mr. Levi Bartlett, of Warner, N. H., writes as follows to the *Journal of Agriculture* :—

The seed-bearing plants cultivated by the farmer, in common with all other vegetable productions, are, from the first movements of the germ in the seed up to the full maturity of the plant, subject to and regulated in all their growth by fixed laws.

Under ordinary circumstances, the results and operations of these laws are the same. The roots possess the power of absorbing the moisture of the soil, which constitutes the sap. The sap of plants is a solution of nutrient matters, saline and organic, which have been dissolved from the constituents of the soil, manure, &c. The sap passes from the root through the pores and tissues of the stem, trunk, or stalk, into the leaves. The salts are assimilated, as, also, is a part of the water; the remainder being evaporated by the leaves. While, at the same time, carbonic acid is absorbed by and decomposed in the leaf—the carbon assimilating with the salts and organic matters. From the leaves the prepared sap descends through another set of vessels and furnishes materials to build up the perfect plant in all its varied parts.

Nature, in the production of the cereals, corn, wheat, rye, oats, &c., has two objects in view: the perfection of the seed for the reproduction of its species, and the providing food for man and animals.

From the early growth of the plant up to the first formation or foundation of the seed the plant is busily employed in drawing from the soil, water, and the atmosphere, the necessary materials required in the mature seed; but as the seed progresses towards maturity, the phosphates, salts, nitrogen, &c., that were disseminated through the entire plant are drawn from it and concentrated in the seeds; and when they are fully ripened the stems, stalks, and straw are much more deficient in nutritive matters than at the time of the flowering of the plant. But as the seed of the corn, grain, &c., is the first object of the farmer, and the forage of secondary consequence, the seed is suffered to ripen before harvesting.

The same or very similar results occur in the ripening of the seeds of the various grasses cultivated for hay. But as it is the stems, leaves and heads of the grasses that are valuable, rather

than the seeds, for feeding purposes, it is for the interest of the farmer to cut his grass for hay at the time it will yield the greatest amount of available nutriment.

Plants, at the time of coloring, contain starch, gum, sugar, and mucilage; all of which are easily digested in the stomach of cattle—and they are all known to nourish them. In the formation of the seed the stem and leaves are greatly exhausted of these substances; and the substance which remains is chiefly woody fibre—a less nutritive and a less easily digested substance.

Farmers differ much in opinion in regard to the proper time of cutting grass. But I find (and it does not require very close observation either) that my cattle are much more fond of clover, redtop and herdsgrass that were cut when the plants were in bloom, than they are of the same kinds that remain uncut till the seeds were ripe enough to vegetate.

From the change that takes place in the grass from the blossoming to the ripening of the seed and the preference given by the cattle to the early cut hay, and the more favorable apparent effect it has upon them, I am strongly of the opinion that a given quantity of the early cut affords more nutriment than the same grasses that are left to nearly mature their seed.

But, as I have said, farmers differ in their views upon a proper time of cutting grass for winter fodder for their stock. I should like to have an expression of the opinion of those who advocate a later cutting of the "hay crop," through the columns of the *Journal of Agriculture*.

For the New England Farmer.

RURAL ARCHITECTURE.

MR. EDITOR :—Will you be so kind as to advise me. I want to become a rural architect, and to commence at the bottom, as the saying is, even at the root of the subject. What work, or works do I want to assist me? What are best? An early answer in the *Farmer* will much oblige a young friend.

North Sanbornton, N. H.

REMARKS.—That is right. Become a Rural Architect, if you have a taste for that business, and stick to your determination to be a thorough one. Not one half of the carpenters in the State are capable of giving satisfactory estimates of the cost of a common house or barn.

You will find SHAW'S Architecture a complete theoretical and practical system of building, containing the fundamental principles of the art. It has eighty-two copper-plate engravings, showing the elevation and working plans of numerous structures. Published by John P. Jewett & Co., Cornhill, Boston.

There is also, The Carpenter's Assistant, by WM. BROWN, and the Modern Builder's Guide, by MINARD LAFEVER—ninety engravings, for sale by Jewett.

The American Architect, by JOHN W. RITCHIE, published by SUTTON, N. Y., comprises original designs of cheap country and village residences, with

details, specifications, plans, directions, and an estimate of the cost of each design.

Read carefully Downing's, Allen's and Wheeler's works on rural architecture.

THE PROGRESSIVE FARMER.

This is the title of a work prepared by Rev. J. A. NASH, Instructor of Agriculture in Amherst College, and member of the Massachusetts Board of Agriculture. The following are the leading heads of subjects which are discussed, viz:—*Agricultural Chemistry; Geology of Agriculture; Vegetable Physiology; Animals and their Products; Manures and Practical Agriculture.* Under these general heads, *particular subjects* are treated in a clear, comprehensive, and attractive manner; such, for instance, as the *origin of soils; amending soils; chemistry of soils; growth of plants; sources of food to plants; animals*,—kind to be kept, general treatment of, and feeding; milk, butter, cheese; relations of soils and crops to manures;—home resources for manures; barn-cellar and pig-pen manures; night soils, sink drainings, composting; *relation of soil to the atmosphere*; application of manures; deep plowing; profits of amending lands; mixing soils and rotation of crops. The arrangement and explanation of the chemical terms, is excellent; and the tabular views of elements, compounds, and salts, are made more easily understandable than we have ever seen in any other book. We believe the work most admirably adapted for use in common schools, and equally so to every young farmer in the commonwealth. It has been submitted by the author to the State Board of Agriculture, from which it was referred to a committee who reported upon it as follows:

That studies, of this description, might be attended to with much benefit, under competent teachers. The surprise is, that they have been omitted so long, while so many, of less practical utility, have been introduced.

Probably, the want of text books adapted to the understanding of the pupils, has been the cause of this.

The Committee have examined the *Progressive Farmer*, a work recently published by Prof. Nash, of Amherst, and think it better adapted to the wants of the community, than any work of the kind, that has come to their knowledge.

J. W. PROCTOR,
EDWARD HITCHCOCK, } Committee.
STEPHEN REED,

The work is published by SAXTON, the Agricultural Book Publisher, N. Y., in his usual good style,—large type, fine paper and handsome binding, at 75 cents a copy, and is worth to most farmers three times as much. The omission of a good alphabetical index is the only fault we have to find with the work. In future editions (for they will soon be demanded) we hope this valuable feature will be supplied.

GUANO.

With the nature and uses of this substance every one is familiar. But where and how it is obtained, and other facts connected with the sources of supply, are not so well known—and as guano has been productive of considerable public excitement of late, a chapter upon the subject may not be devoid of interest.

It is a common impression that the discovery of the fertilizing properties of guano has been quite recently made, and that it is only within a few years that it has come into use. This is by no means the case. It has been used by the Peruvians ever since the discovery of America, having been imported by them from the islands on the coast. Humboldt was one of the first who carried it into Europe and brought it into notice on that continent. This must have been at least thirty years since. It was at first introduced into this country in 1825, but was not used to any extent, and was soon forgotten. It was not until it was very extensively employed in England, that it was again imported into this country. Even now very little, comparatively, is used here, as will be seen by the following statement of the imports for three years:

1849.....	21,343 tons.
1850.....	11,740 "
1851.....	22,153 "

The importation of this article into England, amounts at the present time to not far from 200,000 tons per year.

Guano is found upon barren islands on the coasts of Peru, Bolivia, Chili and Patagonia. It is sometimes met with on the headlands of the coast.—That from the coast of Peru and Bolivia is by far the best, for the reason that rain seldom visits those latitudes. That derived from islands farther south being frequently saturated with moisture, is partially decomposed, and has much of its fertilizing properties washed away.

Guano consists of the excrements of sea-birds, intermixed with the bones of fishes, the fleshy parts of which have served them for food, the shells of eggs, and the remains of the birds themselves—all of which are partially decomposed and mixed together. It accumulates rapidly, first, because the swarms of birds of which it is the product are numberless, and secondly, because it is very rarely washed by rains. The quantity of the deposits on some of the islands is almost incredible. It is stated by Mr. Wilson, formerly British Consul at Peru, that on the Chincha islands—notwithstanding more than three hundred tons a year, have been taken away for use in Peru for centuries, and of late years many thousands of tons—it is estimated that there is still remaining the enormous quantity of 17,000,000 tons. An official survey of several islands claimed by Peru was made in 1847, from which it was ascertained that there were on them over 23,000,000 tons—enough at the present rate of consumption to supply the world one hundred and seventy years.

In some places on the Chincha islands the guano is two hundred feet thick, and it varies from that thickness down to three or four feet. It occurs in successive horizontal strata, each of which is from three to ten inches thick. The lower strata is of a dark brown color, growing lighter towards the surface. No earthly matter is found in these vast deposits.

At the time of the first introduction of guano to the world, it was generally supposed to exist only on the coast of Peru and the adjacent islands. But its value stimulated search, and deposits of a similar character were found on the coast of Patagonia, and on portions of the coast of Africa. Near the latter the island of Ichaboe was discovered to be covered with this valuable fertilizer, from which large quantities were procured. But the island being accessible to the whole world without restriction, there was quite a scramble for the article, and the guano was soon removed. It has been stated that there were at one time over two hundred vessels loading at Ichaboe.

The manner of loading guano is usually to haul the vessel under a cliff, if practicable, or if not the ship's boat, and fill up by means of a chute or long canvass bag open at both ends, and leading from the top of the cliff to the hold of the vessel or into the boat. The work proceeds with great rapidity when operations have fairly commenced. *Boston Jou.*

For the New England Farmer.

EATING THEIR BODIES UP.

BY A. G. COMINGS.

There are many strange things in this world, and among them it is not a little strange that a people having so high claim to the rank of intelligence and wisdom as the people of New England, should really, in this nineteenth century, raise and keep any race or kind of pigs, poultry, or other four legged or two legged animals, which can, being permitted, fall to and most unsparingly eat up their own bodies, not leaving ought in gratitude or respect to their reputable owners. But every day reminds us that "Truth is stranger than fiction."

Being mindful of the fact that the kinds of animals have been somewhat popular heretofore, and not wishing to incur the censures of any well disposed person through any misunderstanding of the subject matter under consideration, it may be permitted that a representation be made, to whomsoever it may concern, to this end and purport, namely, that certain inconsiderate and unprosperous persons who have not the fear of poverty before them, do keep, and propose hereafter to keep, for the occupancy and use of their farms, pigs, poultry, and other living things, which creatures have a most vicious propensity and inclination to eat up their own bodies. And, moreover, as in our judgment the interests of all keepers of stock of every kind common to farms, may, consistently with the public safety, submit to the exclusion of all such vicious animals from the farms of New England, this humble prayer is most respectfully addressed and made to the General Court of Common Sense, now in session, and from hence to continue in session in New England, that the said vicious kinds of animals be expelled from among us for reasons which may follow.

Whereas, there has come among us, and to the no small detriment and dishonor of the old yellow hen, which was a faithful friend to those who lived before us, various kinds of ill-looking creatures which claim to be hens, but have none of the comeliness of the old yellow hen, some of which have their feathers on wrong end foremost, and some do make most unmusical howlings which

are not fit to be called crows, and many of these do in a manner most unworthy of all praise, and without leaving one praiseworthy egg, eat up their own bodies, it is desirable that these be forthwith driven out of the farm-yard and out of the market-place.

And whereas there are that are called cows, some of which may appear very beautiful without, that have become intruders in many of the barnyards of New England, which do not give milk enough to pay for their daily bread, and, as a consequence do without any restraint eat up their own bodies, it is desirable that these all be required, in all their tribes and generations, as soon as possible, to offer themselves to the butcher and be ready to lie down in quiet.

And whereas, also, there are hogs and old horses, dogs and dandies, which all do fall short of earning for themselves a living, and most of which do eat up their own bodies without modesty or shame, it is desirable that these be delivered to such officers as will duly execute upon each, according to his circumstances, whatever judgment the public good shall require.

ABOUT HENS.

Much has been said about the importance of large hens. It is fast coming to be understood and known that the difference between the large fowls and the common fowls which we have raised heretofore, is about this. The large ones will grow to double the weight of the common hens, and with double the weight of body there is three times the weight of bones. The cost of raising a hundred weight of the large kind is more than of a hundred weight of the small kind, and is less saleable in market and less inviting upon the table. Before the large hens can be brought to full size and well fattened, they will much more than eat up their own bodies, in the cost of keeping, under ordinary circumstances. The more such fowls a man raises for market, the poorer he will be.

ABOUT COWS.

Among country farmers there are a great number of cows kept which give milk not more than about eight months in the year, and during this time would not make, on an average, more than two pounds of butter each week. Thus a cow would fall short of making 75 pounds of butter in a year. The average price of butter, in the country, is not over 16 cents, taking one year with another. This would give for the butter \$12. Add to this \$2 for the milk after the cream has been taken off and \$1 for the calf at three days old, and you have \$15 as the proceeds of the cow for one year. Now for her cost. Call the cow worth \$15 to turn into beef. The interest of \$15 is 90 cents. (Omit tax on the cow.) Her keeping in summer \$5. In winter \$12. Time and labor in milking and taking care of milk and butter, \$8. This would make the sum of \$25.90 for the yearly expense of the cow, while her yearly income is only \$15.

Now suppose that the cow would give milk 10 months in the year, and for 25 weeks would make 8 lbs. of butter per week, and for 17 weeks more would make 4 lbs. per week, making in all 268 lbs., (which is far below the product of many good cows,) it would amount to \$42.88 cents. Who will find a difficulty in seeing that one of the cows is a dead loss of nearly \$11 in a year, and

would eat her body up, under such circumstances, in less than a year and a half, while the other would give a clear profit of nearly \$17 per year, allowing the same expense of keeping, &c. But making \$5 allowance for extra expense of interest keeping and tending, and there would still remain a clear profit of about \$12 per year, or the interest of \$200, and a difference in the profits of the two of about \$25 per year. A good cow, with good keeping, ought to afford 300 lbs. or more of butter yearly.

ABOUT HORSES.

The old horse that does not earn more than a half dollar per week, the year round, will cost for keeping and shoeing not less, certainly, than \$50 in a year. Suppose him to be worth \$20, and see how the gain or loss will be. Interest on \$20 for one year will be \$1.20; taxes we will call 10 cents; cost of keeping and shoeing \$50; making a total of \$51.30. Service of the horse at 50 cents per week, \$26. This subtracted from \$51.30 leaves a bill against the old horse of \$25.30. This is \$5.30 more than the horse was worth at the beginning of the year. The old horse has eaten his body up, and is ready to go about doing it again. Pretty soon he will swallow down a calf or a yearling, or perhaps a small cow, besides eating himself up. Whether farmers will continue to keep such kinds of creatures is a matter for them to inquire into.

As to dogs and dandies, they are generally about as much profit to a farm as the itch is to a family of children. They keep the farmer scratching all of the time, to make a poor living. They are not fit to throw to the hogs, and they eat themselves all up for a breakfast every day they live. All the use we can think profitably of making of them is to put them into the poultry yard to help the Shanghai roosters to crow.

Mason, N. H.

Mechanics' Department, Arts, &c.

HOOSICK TUNNELING MACHINE.—A writer in the *Traveller* furnishes a long report of the doings of this machine, the substance of which is, that though difficulties incident to the magnitude and novelty of the machinery have been encountered, its ultimate success is considered certain by those best acquainted with it. He says:

"It may be proper to state that among those who have witnessed these operations, are some of the best engineers and most scientific gentlemen in the United States. They have, without an individual exception, expressed a favorable opinion of the principle on which its superior excellence is founded, and believe it will not disappoint the expectations of its numerous friends and well-wishers. The directors of the Troy and Greenfield Railroad Company are satisfied that its success is sure, as their expectations are more than realized."

Fast Travelling.—The express train which left Boston at 4 P. M. Sunday, with the English mails for the South, reached the depot in New York at quarter before 10 o'clock, making the passage in

five hours and three-quarters! This is the quickest time ever made over the road. Twenty-five passengers enjoyed this whirling through the air.

Boy's Department.

A FLOGGING MASTER OF THE LAST CENTURY.

In the volumes of *Miscellanies* by De Quincey, just published in this country, the "opium eater" thus describes Bowyer, a teacher, who religiously adhered to the doctrines contained in the old proverb, of "Spare the rod and spoil the child":—

"The third person raised to divine honors by Coleridge was Bowyer, the master of Christ's Hospital, London—a man whose name rises into the nostrils of all who knew him with the gracious odor of a tallow-chandler's melting house upon melting day, and whose memory is embalmed in the hearty detestation of all his pupils. Coleridge describes this man as a profound critic. Our idea of him is different. We are of opinion that Bowyer was the greatest villain of the eighteenth century. We may be wrong; but we cannot be far wrong. Talk of knouting indeed! which we did at the beginning of this paper in the mere playfulness of our hearts—and which the great master of the knout, Christopher, who visited men's trespasses like the Eumenides, never resorted to but in love for some great idea which had been outraged: why, this man knouted his way through life, from bloody youth to truculent old age. Grim idol! whose altars reeked with children's blood, and whose dreadful eyes never smiled except as the stern goddess of the Thugs smiles, when the sound of human lamentations inhabits her tears. So much had the monster fed upon the great idea of 'flogging' and transmuted it into the very nutriment of his heart, that he seems to have conceived the gigantic project of flogging all mankind; nay worse, for Mr. Gilman, on Coleridge's authority, tells us (p. 24) the following anecdote:

'*Sirrah I'll flog you,*' were words so familiar to him, that on one occasion some female friend of one of the boys (who had come on an errand of intercession), still lingering at the door, after having been abruptly told to go, Bowyer exclaimed—'Bring that woman here, and I'll flog her.'"

NOVEL SCHOOL REGULATIONS.—A Canadian paper gives the following as the literal copy of the rules and regulations adopted by the school trustees of school section No. 14, in the township of Nissouri, Oxford. It is worthy of preservation as a curiosity of literature:—

"Thou shalt not lie thou shalt not swear thou shalt not speak a smoty or blagard talk thou shalt not steal thy neighbor's dinner his ink or handle his books or anything that is his.

"No whispering no laughing no leaving Seats with liberty nor medole with books Slates pens nor ink without liberty no quarreling no lying no Swearing Stealing nor telling tales out of schools no disputing no bad language no fitting no pushing each other in the mud nor in the ditch on the road home.

"Any children coming without proper books their parents to be no to fyed by a letter if not punctually attended to shall be liable to be dismissed from school."

Advertising Department.

A limited number of advertisements of an appropriate character will be inserted in the monthly Farmer at the following

RATES.

For one square of 15 lines, one insertion.....\$1.00
For each subsequent insertion.....50

The above rates will be charged for all advertisements, whether longer or shorter.

Great Offering of Real Estate.



The subscriber wishes to sell his homestead place well known as the CATBOW FARM, consisting of five hundred acres, over two hundred of which is first quality intervalle, and in a state of high cultivation, the residue is upland pasturing and wood. The farm is beautifully situated in Lancaster, the shire town of Coos County, N. H., on the banks of the Connecticut River. The location is one of the most attractive and beautiful in New England, the scenery is magnificent, both in summer and winter, and for beauty cannot be surpassed. The river at this place assumes the form of a curve, so that sixty five acres are enclosed by nineteen rods of fence. It is but one day's ride from Boston, and is only a short distance from the Atlantic and St. Lawrence Railroad. There are two good dwelling-houses and other necessary buildings on the place. A sufficient quantity of water of excellent quality is conducted to the houses and yards from a never failing spring. He also offers for sale, a large tract of eighteen hundred acres nearly adjoining the above, mostly covered with timber and of easy access to said river. He will also sell his house known as the "WHITE MOUNTAIN HOUSE" and farm of two hundred acres, well and pleasantly situated at the White Mountains; has a good run of custom during the visiting season. This is a fine opportunity for a good and safe investment. All or part of the above property will be sold at a bargain, as the owner wishes to lessen his care. For further particulars and terms, inquire of the subscriber at Lancaster, or at this office.

JOHN H. WHITE.

Jan. 15, 1853.

3m*14

Ayrshire Stock.



about one year old.
Jan. 1, 1853.

Wanted, a thorough bred Ayrshire Bull, and Heifer, not exceeding two years old. Any person having such for sale, or very likely Calves, will please apply to the subscriber at this office.

Also wanted, a fine native Bull,
JOHN RAYNOLDS.

Administrator's Sale of a Farm in Concord, Mass.

BY License of the Court of Probate for the County of Middlesex, will be sold at Public Auction on Saturday, March 26th, at 1 o'clock P. M., on the premises; the farm lately owned by Capt. Humphrey Hunt, (deceased) situated in Concord, Mass., $\frac{1}{2}$ a mile from the village centre, on the main road to Lowell—comprising about 75 acres of first rate land, well divided, and entirely fenced with stone wall, having thereon two wells of excellent water, also, a spring of soft water; is abundantly stocked with fruit trees, mostly budded and grafted fruit, and a good cranberry meadow, which yield largely in favorable seasons. Said farm has descended from father to son, since the first settlement of the town to the present time, and has always been kept in a high state of cultivation, and is considered by competent judges to be as desirable a farm, both from quality of soil, and beauty of location, as any in the county. Also will be sold about 60 acres of pasture land, situated in north part of the town, and $\frac{1}{2}$ miles from said farm; also, 5 acres situated in east part of town, known as "Great Field." Likewise, two good cows, small lot of good English hay, one cart, and a few farming tools. Immediately following the sale of the above, will be sold a portion of the household furniture, bedding, &c., &c. Terms liberal, and made known at time of sale. Should the weather be stormy on the day above mentioned, the sale will be postponed to the same hour on following Monday. For further particulars, inquire on the premises, or to

SIMON BROWN, ESQ.,
Editor of the New England Farmer.
B. N. HUDSON, } Administrators.
J. B. MOORE, }

S. STAPLES, Auctioneer.
Concord, Jan. 29, 1853.

8t

Bound Volumes.

BACK VOLUMES of the NEW ENGLAND FARMER, elegantly bound in Muslin, Gilt and Embossed, are now for sale at this office.

The Farmers' Library.

JUST RECEIVED, the following assortment of Agricultural and Horticultural Books, embracing the standard works of eminent American and European writers, on the Farm, the Orchard, the Garden, &c. &c.

	PRICE.
American Farm Book, by Allen,	\$1.00
Farmer's Treasure, by Faulkner and Smith,	75
Dana's Muck Manual,	1.00
Prize Essay on Manures, by Dana,	25
American Muck Book, by Browne,	1.00
Lectures on Practical Agriculture, by Johnstone,	75
Elements of Scientific Agriculture, by Norton,	50
Principles of Agriculture, by Thaez,	2.50
Practical Agriculture, by Johnstone,	75
Agriculture for Schools, by Blake,	1.00
Catechism of Agriculture and Chemistry, by Johnstone and Norton,	25
American Agriculturist, by Allen,	1.00
Liebig's Complete Work on Chemistry,	1.00
Farmer's and Emigrant's Hand Book, by Marshall,	75
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Bridgeman's Gardener's Assistant,	2.00
Bridgeman's Kitchen Gardener's Instructor,	50
American Fruit Culturist, by Thomas,	1.00
Gardener and Complete Florist,	25
Florist's Guide, by Bridgeman,	50
New England Fruit Book, by Ives,	56
Yonatt and Martin on Cattle, by Stevens,	1.25
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Johnson's Gardener's Dictionary, by Landreth,	1.50
Rural Economy, by Bonasingault,	1.00
American Rose Culturist,	25
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Genera of Plants of the U. S., by Gray, 2 vols.	12.00
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Bird Fancier, by Browne, paper 25 cents,	50
Townley on Bees,	50
American Poultry Yard, by Browne,	1.00
American Poultryers' Companion, by Bement,	1.00
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Diseases of Animals, by Cole,	50
Hints to Sportsmen, by Lewis,	1.25
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Management of Sheep, by Candell,	1.00
Yowatt on the Pig,	60
Knowlson's Complete Cow Doctor,	25
Horse Doctor,	25
Guenon's Treatise on Milch Cows,	38
Treatise on Hot Houses, by Leuchars,	1.00
Allen on the Grape,	1.00
Schenck's Text Book,	50
Brock's Book of Flowers,	75
Downing's Fruit and Fruit Trees,	1.50
For sale at the Publishers' prices by RUGGLES, NOURSE, MASON & Co., Quincy Hall, (over the Market,) Boston.	
April 3, 1852.	1f

Pure Suffolk Pigs.



Quebec, Vt., May 29, 1852.

The subscriber has now on hand pure blooded Suffolk Pigs for sale. Purchasers ordering them from a distance for breeders, may rely on getting the best patterns of the breed, carefully selected from different litters.

J. L. LOVERING.

1f

Garden Seeds.

WE respectfully solicit the attention of purchasers of GARDEN SEEDS to our extensive stock, which we offer for sale. We have all the sorts of Vegetable Seeds that have proved worthy of cultivation; also, Grain, Grass and Flower Seeds. All the varieties are raised and selected expressly for our trade, and we do with confidence recommend them to all who desire to procure seeds that will prove true to their names. Catalogues gratis, on application.

RUGGLES, NOURSE, MASON & CO.,
Jan. 1. Over Quincy Market, Boston.

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Pure Black Spanish Fowls.



A few pairs choice Black Spanish Fowls, raised from stock imported this season. For sale by THOMAS THACHER, Jr., at the Fulton Iron Foundry, South Boston. Oct. 16, 1852. 3m*3

Corn Shellers.

IMPROVED YANKEE CORN SHELLERS, with and without separators. These machines are adapted to large and small varieties of corn, will shell rapidly and not liable to get out of order. For sale, wholesale and retail, over the market. by RUGGLES, NOURSE, MASON & CO. Nov. 27, 1852. 3m

Horse Empire State.

This splendid Horse, which was the admiration of all who saw him last season, has again made his appearance, and will be kept at MATHES' STABLE, ROXBURY, for the improvement of stock.

Said horse is of the Messenger and Durock stock, and is of a beautiful jet black color, weighs 1150 lbs., and is thought by competent judges to be the handsomest, fastest and best entire horse in New England.

Roxbury, April 24, 1852. tf

Durham Bull.



Wanted, a pure bred DURHAM BULL, from one to two years old, of handsome form and color.

Apply at this office. Jan. 15. tf

NEW ENGLAND FARMER

Is published on the first of every month, by JOHN RAYNOLDS and JOS. NOURSE, at Quincy Hall, South Market St., Boston.

SIMON BROWN, Editor.

FREDERICK HOLBROOK, } Associate
HENRY F. FRENCH, } Editors.

Terms, \$1.00 per annum in advance.

All subscriptions to commence with the volume, Jan. 1. The FARMER, is devoted exclusively to Agriculture, Horticulture, and their kindred Arts and Sciences; making a neat volume of 576 octavo pages, embellished with numerous engravings. It may be elegantly bound in muslin, embossed and gilt, at 25 cts. a volume, if left at the office of publication.

Also published at the same office every Saturday, on a large handsome folio sheet, the

NEW ENGLAND FARMER, (WEEKLY,)

An Independent Agricultural Family Newspaper.

The News and Miscellaneous departments under the charge of WILLIAM SIMONDS, will include a full and careful report of the news of the Markets, and the news of the week, such as Domestic, Foreign and Marine Intelligence, Congressional and Legislative proceedings, Temperance and Religious Intelligence, and a general variety of Literary and Miscellaneous matter, adapted to family reading, comprising more useful and valuable reading matter than any other Agricultural Newspaper published in New England. Everything of a hurtful or even doubtful tendency will be carefully excluded from its columns.

Terms \$2.00 per annum in advance.

The monthly contains nearly the same matter as the Agricultural department of the weekly.

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All orders and letters should be addressed, post-paid,

RAYNOLDS & NOURSE,

QUINCY HALL, SOUTH MARKET STREET, BOSTON.

POSTAGE.—The postage on the New England Farmer, monthly, is 1½ cents per quarter, or 5 cents per year, to any part of the United States, to be paid in advance at the office where the same is received.

AGRICULTURAL

WAREHOUSE AND SEED STORE,

QUINCY HALL, OVER THE MARKET, BOSTON.

THE Proprietors having recently enlarged their Warehouse, and increased their works at Worcester, would respectfully invite the attention of Planters and Dealers in AGRICULTURAL & HORTICULTURAL IMPLEMENTS, GARDEN and FIELD SEEDS, &c., to their stock, comprising the largest and best assortment to be found in the United States, which are offered at low prices.

OF PLOUGHS—we have the greatest variety of kinds and sizes.

Improved Sod Ploughs, for flat furrows—Improved Scotch Ploughs for lapped furrows—Improved Stubble Ploughs, which are especially adapted to deep tillage, or varying from 6 to 12 inches in depth.

Self-sharpening, Hill Side, Sub-soil, Double Mould, Corn, Cotton and Rice Ploughs.

Cylinder Hay Cutters, Smith's Patent Lever Gate, and others. Patent Corn Shellers, with and without Separators. Seed Sowers, of various sizes and prices. Batchelder's patent Corn Planter, improved. Fanning Mills of various sizes, Horse Powers, Thrashing Machines, thermometer Churns, Robbins' patent Centrifugal Churn, Cylinder Churn, Dash Churn, Corn Planters, together with almost every article wanted on the Plantation, Farm or Garden.

Illustrated Catalogues sent gratis on application, post paid.

RUGGLES, NOURSE, MASON & CO.

Boston and Worcester, Mass., Jan. 1, 1853 tf

Ice Cutting Tools.

WYETHE'S Patent Ice Markers. Do. do. Hand and Large Cutters. Also, a large assortment of Hooks, Saws, Grooving and Packing Bars, Toops, &c. &c.

For sale and warranted, at manufacturers' prices, by RUGGLES, NOURSE, MASON & CO.,

Nov. 12.

tf

Over Quincy Market, Boston.

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. V.

BOSTON, MARCH, 1853.

NO. 3.

BAYBROOKS & NOURSE, PROPRIETORS.
OFFICE....QUINCY HALL.

SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

CALENDAR FOR MARCH.

"MARCH, month of 'many weathers,' wildly comes
In hail, and snow, and rain, and threatening hama.

From bank to bank, along the meadow lea,
The river spreads, and shines a little sea."

WILLIAM HOWITT, in "The Book of the Seasons," says "March is a rude and boisterous month, possessing many of the characteristics of winter, yet awakening sensations perhaps more delicious than the two following spring months; for it gives us the first announcement and taste of spring.

"There are occasionally mornings in March when a lover of nature may enjoy, in a stroll, sensations not to be exceeded, or perhaps equalled, by anything which the full glory of summer can awaken." Now the first signs of the early spring appear in the snowdrops; they peep above the ground and try to show a flower; the yellow hellebore and the spring crocus appear in warm situations, and if in regular form, give to the garden a brilliant aspect:

"Crocuses, like drops of gold,
Studded on the deep brown mould,
Snowdrops fair, like flakes of snow,
And bright liverworts now blow."

Well did the poet call March the month of "many weathers," so changeable is it. Sometimes the tempest howls, driving flakes of snow through the air. At other times, the cold and sleety rain falls in torrents, carrying along with it the snow which it has melted in the mountains, and at other times the hoar frost lies thick and chill, and spreads its snowy mantle over the fields, while the deep blue sky, and the sun rising in the glowing east, without a cloud, speak deceitfully of to-morrow's softness and beauty. And, in the beautiful verse of Mrs. Barbauld--

"Hardly now the snowdrop dunes appear,
The first pale blossom of the vernal year,
As Flora's breath, by some transforming power,
Had changed an icicle into a flower;
Its nameless stem the scutellion plant retains,
And wings flutters in its icy veins."

But there are interesting proofs of the advancing year. The day has increased in length, and the sun takes a wider sweep and darts more

beams. The buds begin to swell, the tops of the elm and white maple thicken wonderfully, while the catkins of the willow throw their elegant forms on the sight. In still days, and sunny places, under the friendly brush heap, or in the sheltered nooks of the garden, the warbling sparrow regales us with its cheerful song, or the plaintive note of the blue-bird is heard for a few moments from his old hollow branch in the morning.

Then, stronger suns warm up the bosom of the earth, new forms of vegetation appear; the gay dandelion dots the reluctant green, and the modest violets hold up their beautiful heads.

Now that we have briefly glanced at the grand movements of Nature, let us turn to some of our own, so humble compared with her imposing March.

Books.--All farmers have, or ought to have, trees--and they ought to understand something of their peculiar properties. Such as their comparative value for fuel or timber, or endurance as fencing materials. Well, Emerson's book on Trees and Shrubs, to a farmer who loves his calling, is more interesting than a political paper or the last novel. There is time now, before the evenings are short or the snow-flakes cease to fly, to give that book a perusal. If you intend to clean out those ditches, or have not quite decided to get up 50 cords of swamp mud next summer to experiment upon with guano, or lime, or salt, these blustering March days and evenings will afford a fine opportunity to bring your decision up to the sticking point, by reading Dana's Muck Manual, the American Muck Book, or several others full of safe teachings.

SUNSHINE.--Is a humbug, is it? Ah, no. We are all indebted to it for the best comforts we enjoy. No man is already more deeply indebted to its teachings, or may still look forward with expectations of benefit from it, than the farmer. It is merely making the head work, instead of the hands. Its iron thews and sinews do not ache or tire. It

is but "knowledge methodically digested and arranged—a liberal art." And the springs of the hills, or the sunshine of Heaven, have been no more liberal to the farmer, than this much condemned *science*! There is still time left in March to understand it better.

MANURE.—While the mornings are frosty and the ground frozen for a few hours, the opportunity should be improved to cart out manure and drop it in heaps of convenient access to the fields where it is to be used. The heaps should be covered with muck or loam, and occasionally overhauled, and thoroughly pulverized and mingled. It is an error to use coarse and crude manures; the finer they are made, the more generally will they be diffused through the soil, and give off their fertilizing properties to the delicate roots in search of sustenance. It is therefore labor well repaid to get manure into compact heaps, bring it into slight fermentation, and work it over until it is all reduced so fine as to be easily worked with the shovel.

SEED POTATOES.—Sort and collect such potatoes as are intended for seed; also prepare the seed corn, and all garden seeds, that no time may be lost when the earth is waiting to receive them, and when you feel that the day is scarcely long enough to accomplish what you desire.

THE WOOD PILE.—Money invested in a year's stock of good wood, so that it may always be had dry, is better than in 6 per cent. stocks. In this estimate we do not take the item of *good temper* into the account at all, but look at it merely in a financial manner. Then let it be cut, split,—and if it can be put under cover where a draft can pass through it,—piled before the month closes. Such fuel has a wonderful tendency to keep peace in the kitchen!

THE STOCK.—Perhaps at no season does the stock require more attention than in this month—especially cows that are coming in. They should not be exposed to sudden changes—sleet, snow, sunshine and high winds. Feed liberally, and use the card gently, but freely.

But, enough for March. Seed time has been promised us. Soon the earth will unfold her ample bosom to receive our labors, and we must be ready to accept her favors, which, if once neglected, cannot be recalled.

DAIRY WOMAN WANTED.—Attention is called to the advertisement for a dairy woman, in the proper department of this paper. Windsor is one of the most romantic, healthy, and beautiful towns in New England, and the opportunity for a skilful person to engage in this business is a good one.

FINE PORK.—We recently noticed a lot of nine Suffolk hogs at the stall of Mr. Richards in Faneuil Hall Market, weighing respectively 263, 256, 392, 318, 351, 236, 309, 252, and 229, fatted and sent

in by J. L. LOVERING, Esq., of Hartford, Vt. These hogs were pronounced by those accustomed to the *porkers* as the best lot seen in our market this season. They were selected for fating, as they lacked some of the fine points for which Mr. Lovering's swine are famous. The one giving the largest weight above was a sow who gave a litter of pigs in September last.

The Suffolks which we have frequently obtained for our friends were from this gentleman's stock.

PECULIAR DIFFICULTIES OF NEW ENGLAND HUSBANDRY.

[EXTRACTS FROM MR. FRENCH'S ADDRESS.]

The abolition, in our country, of the rights of primogeniture, and preference of males over females, in inheritance, is another difference between us and England, which operates to prevent the accumulation of large estates; and so, to render impossible here the grand and expensive schemes of improvement, of which we read so much in works on British husbandry.

By the English Common Law, the eldest son inherits all the father's real estate. Here every son and daughter inherits an equal share.

There, immense tracts of land are owned by a single individual, and it is his pride to preserve and increase the estate in extent and value through his life, and transmit it to the son who bears his title, while the other children are left landless and often dependent.

Mr. Colman states that the Duke of Portland, by turning the course of a river, irrigates at his pleasure between three and four hundred acres of land. Lord Yarborough has more than 60,000 acres of land in his plantation. He has 150 tenant farmers, and more than 600 tenants in all, and you can ride upon his estate in a direct line *thirty miles*. One of his tenants said he, the tenant, raised 18,000 bushels of wheat in a year; and many of the tenants pay a rent of 5 or \$6000 a year.

BARREN NEW ENGLAND SENDS FOOD TO STARVING IRELAND.

But, while we are amazed at the grandeur of the estates of the English nobility, while we feel that the vast operations in agricultural improvement practiced there are, from the nature of our lands, impossible with us, we should remember also, that 600 tenants, the happiness of each of whom is of as much value in the sight of Omniscience as that of the lord of this vast domain, are dependent, that *one* may be great. And we have a right to feel proud, that New England, from her barren hills and small and half cleared farms, but a few years since, freighted whole ships with food, as charity for starving Ireland,—with food for the tenants even on the estates of English nobles, and that although we have no great estates, we have, on the other hand, enough for ourselves, and something for our hungry neighbors.

POVERTY OF NEW ENGLAND SOIL.

The *poverty of our soil* would be, at once, suggested by a citizen of a southern or western State as the one great insuperable obstacle in the way of farming in New England.

If, however, we had time to institute a thorough comparison between the condition of the whole

population of those fertile regions and our own, we should find little reason to envy their position.

I have somewhere seen an anecdote, which illustrates, in a few words, the peculiar advantages of the southern mode of agriculture. A planter was speaking of the large quantity of corn, and the number of swine annually raised on his plantation. "You must grow rich very rapidly," remarked a bystander, "at that rate." "Yes," said he, "I should, were it not for one or two circumstances; but the fact is, every winter my slaves eat all the corn, and my slaves eat all my swine, and in the spring I have nothing but the slaves left."

WHEAT CROP REDUCED FROM FORTY TO FIFTEEN BUSHELS AN ACRE.

New England soil may now, perhaps, be properly denominated poor, and this is partly its natural state, and partly induced by an exhausting course of husbandry. The great and ruinous mistake of American husbandry thus far, has been that of *taking without giving*—of robbing the soil of the elements of fertility, and returning nothing to it. This course has been pursued everywhere through our country, under the false though specious idea, of *developing the resources of the country*.

Railroads and canals have been opened. Wheat was developed in New England, until the lands, which a century ago, produced abundant crops, now produce no crop whatever. It has been developed in the fertile lands of New York, till the average product of whole countries has been reduced from 40 to 15 bushels to the acre. The resources of the soil of Virginia have been developed in the shape of tobacco, till the lands were absolutely barren, under their old system of treatment, and Yankee enterprise, with improved cultivation, is just now restoring them to fertility, making New England homes where, as John Randolph said, Virginia aristocracy was fairly starved out.

THE SAME SYSTEM WILL BRING THE SAME RESULTS IN THE SOUTH AND WEST.

Such a robbery of the soil, of the very marrow of its system, such a development of the resources of the land, as freights whole rivers and canals and railways with potash and phosphoric acid, and the other essential elements of growth, in the form of wheat, and corn, and cattle, carrying them to large cities, to be there consumed, or shipped abroad, and making no return to the soil, will soon bring to a level the fertile lands of the West and South, and the hills of New England.

The difference is diminishing every day, and the time is not far distant, when *everywhere* in the South, the West, and the North, the truth will be forced upon us, that we can receive from the soil no more than by intelligent culture we in some way cause to be returned to it, and it depends upon ourselves whether we shall pursue a ruinous course of husbandry, till our lands are cursed with barrenness, like the tobacco lands of Virginia, or whether we shall clothe our hills with traces of beauty and fill our valleys with fertility.

NEW ENGLAND ENJOYS AN UNSURPASSED CIVIL AND RELIGIOUS FREEDOM.

Yes, New England soil, compared with that of portions of the West, is poor and hard to till, but yet compared with most portions of the cultivated countries of the earth, it yields a fair return for labor. Indeed, it yields already, as I have said,

enough and to spare of the necessities of life; and if we sit down and soberly make up the account, remembering that no other land on which the sun in his course looks down, enjoys at this moment so much of true civil freedom and "freedom to worship God" as this New England,—that in no other land are life and property so secure—in no other land is education so generally diffused—remembering too, that God has so ordered it, that pure morality, and brave and honest hearts should ever thrive best upon a rugged soil—remembering too, that here are the graves of our fathers, and here the happy homes of our childhood. If we consider all these things, we shall still take courage and thank our Maker that our lives have fallen in pleasant places, and that we have, indeed, a goodly heritage.

AGRICULTURAL SCHOOLS.

The want of Agricultural Schools, and of the opportunities for obtaining an accurate scientific knowledge of the true principles and practice of husbandry, is in New England at the present day a singular circumstance to be named as a difficulty in such pursuits.

It would seem that we regarded agricultural skill as an *instinct* of our nature, that we supposed this to be an exception to the general rule, that knowledge is found by studious search for it, and that, like the birds of the air, which a thousand years ago built their nests as skilfully as now, we had by nature implanted in us, as much of a sort of gift of cultivating the earth as would ever be of any advantage to us.

Men begin, however, to regard this matter in a different aspect, and are getting light enough to make the darkness visible. They begin to feel, that from the fact that farmers live apart from each other, and have not like merchants, and lawyers, and manufacturers, occasion to meet and compare results, and form systematic arrangements for future action, they lose the great advantages of mutual experience.

They begin to feel, that to learn from Nature alone is a slow and toilsome process—that human life is too short for each individual to work out for himself every experiment important to be tried—that some Board of Agriculture, some Department of Government—some central point somewhere must be established, whereby the results of careful and continued observations may be collected, and compared and published to the world.

LITTLE PROGRESS IN TWO THOUSAND YEARS.

It is lamentable to observe, how entirely almost for centuries agricultural experience has been wasted, how little progress has been made, even in 2000 years, in many branches of husbandry. The Greeks and Romans understood, almost as well as we do, the uses of various kinds of manures. We read now-a-days in the Agricultural Reports and journals of the importance of mixing soils—clay with sand—as if it were some grand discovery of modern times; yet Theophrastus recommended the same thing twenty centuries ago. Farmers talk about feeding down their winter grain in autumn as a thing worth trying; a practice of which Virgil speaks, as familiar among the Romans.

The science of *chemistry* has indeed opened in modern times a book of Nature's operations before entirely sealed, giving us, if not yet, an accurate

knowledge of how she curiously fashions bud, and leaf, and blossom, of various form and color, and taste and fragrance from the same air and earth and water—giving us at least some hints of the results of her elective affinities—showing us that each rootlet instinctively seeks out the nourishment essential to the plant—that the elements which compose the harvest must be somehow supplied to the growing crop, and that the ear of corn is but a new arrangement of particles of matter every one of which before existed, and that Nature herself, however mysteriously, works with *means*, and though she fashions anew, never *creates*.

THE MILK TRADE.

This important business is attracting considerable interest. The facts elicited at the recent conventions have drawn attention to the subject, and people are surprised at the looseness and uncertainty in which the matter is conducted. It is just as important to the *consumer* as to the *producer*, that the whole trade should be regulated by law, as is all other commerce. We trust that those who have taken the incipient measures towards regulating it, will be active and determined until all those guards and restraints are sanctioned by the Legislature, which are indispensable to a fair trade in the article.

The people of Waltham have backed up their action in the Convention by several meetings, at one of which they adopted the following preamble and resolutions. We hope to find this spirit prevailing in every town in the Commonwealth.

Whereas at the Milk Convention held in Boston, Jan. 26th, it was voted to adopt wine measure as a standard measure for milk, also to petition the Legislature for the passage of an act requiring all milk cans to be sealed. Therefore,

Resolved, That we, the farmers of Waltham, do heartily concur with those resolutions which aim at a reform much needed, and when carried into effect will prove a mutual benefit both to the producer and consumer.

Resolved, That on and after April 1st, we will sell our milk by wine measure, and by no other.

As it is a well known fact to every farmer that the producing of milk is a money losing business,

Resolved, That we will take such measures as will secure to the producer a fair compensation for his labor.

ADDRESS AT THE VERMONT STATE FAIR.—Through the polite attentions of the author, Wm. S. King, editor of the *Journal of Agriculture*, we have received a copy of the Address delivered by him at the late State Fair in Vermont. After a brief notice of the object of such associations, and a glance at the offerings on the occasion, the address is principally devoted to the inculcation of scientific husbandry. It is written in an easy and attractive style, abounds with forcible illustrations, and knocks in the head a thousand of the current prejudices which exist. *Labor omnia vincit*, brother King—we shall conquer if we labor and faint not.

So may the valleys echo with your tones, and the hills send back the sounds to the remotest parts of the land.

For the New England Farmer.

BLACK KNOTS ON PLUM TREES.

MR. BROWN:—Sir, I noticed in a late number of the *New England Farmer*, an inquiry by W. R. C., concerning the black knots on plum trees, and a reply by G. B. Slade. So much has been published upon the subject, that I can hardly expect to communicate anything new, yet I feel disposed to give an account of some of the experiments that I have witnessed. The practice of W. R. C., in cutting off the warts *as soon as they appear*, and burning them, is a good one, and the recommendation of Mr. Slade, saying, "cut freely, sparing no imperfection of wood," cannot be improved upon. There is indisputable evidence that the excrescences are the work of insects, for in the experiments made by different members of my family, two different species of insects have uniformly been found to inhabit them. One, the curculio, or plum weevil; and the other, a small moth, about one-fifth of an inch in length, wings having the appearance of copper, watered with brown velvet. The experiments were made by cutting out a section of the limb containing the excrescence, and placing it in a small box or glass partly filled with moist earth, covering the top with coarse gauze so as to admit air, and prevent escape. My daughters, in pursuing their experiments, procured a lot of cheap glass tumblers and rings of wire that could be passed over them easily, then cut pieces of gauze large enough to fall over the top, about an inch deep, and wound the edge of the gauze over the ring and sewed it tight, thus making the cover secure and easy to be managed. The maggots would, in a short time, leave the excrescence, a part spin cocoons, the other part enter the earth; from the cocoons came the moths above described; those that entered the earth were curculios.

Of course, we were exceedingly puzzled to decide which species were the authors of the mischief. One season, when the late frosts had destroyed the fruits, the black warts were unusually numerous; we then supposed it must be the curculio, but more recent investigations have convinced me that it is the moth, and that the curculio takes possession of the spongy excrescence for want of other accommodations. I have come to the above conclusion, from the fact, that the black knots have within three or four years almost entirely disappeared in this vicinity, while the ravages of the curculio are as destructive as ever. Moreover, the excrescences do not appear until the month of July, and long before that time the first crop of curculios have done their work, and undergone their change.

The moths must, of course, pursue the habits of all the wood borers, lay their eggs on the bark of the limb, and when they are hatched, the little maggots eat through the bark into the wood and there increase in size until they are ready to go into the chrysalis state, preparatory to their change into the perfect insect. Mr. Slade thinks that locality has nothing to do with it. I think so too, but am convinced that *variety* has, for I have noticed that trees bearing a certain kind of plum were destroyed, or their limbs killed and rendered

unsightly, while other varieties in their immediate neighborhood were left undisturbed. So with the cherry. The Black Hearts would suffer from their attacks, while the Honey Hearts and Red Bigarreaus standing near them would escape. It is therefore reasonable to conclude, that insects can discover as different tastes in the wood of different kinds of trees, as we do in the fruits they bear.

I intended when I commenced writing, to make a few remarks on the habits of ants and aphides, but my article is already too long for the value it contains. But why, may I ask, is the study of entomology so much neglected? Nothing can be more interesting or useful to the lovers of nature, and surely, nothing can be more beautiful than many of the insect tribes, to wit: the moths and butterflies, for truly has a distinguished writer said, "that nature appears the most beautiful in her smallest works." Yours respectfully,

MRS. NOYES DARLING

New Haven, Ct., Jan. 31, 1853.

REMARKS.—It is a significant and encouraging evidence of the interest taken by our people in the cultivation of fruits and flowers, as well as grains and all other farm and garden productions, to find them replying readily to queries propounded by others. Only two or three weeks since an inquiry was made by one of our correspondents for a remedy for warts on plum trees. We have received some half-dozen replies, and among them, the above from a lady, an ardent lover of the farm and the garden. Where the inquiries are pertinent and the answers brief and clear, we know of no way better calculated to elicit valuable information. We welcome our fair correspondent to our columns, and trust "the daughters" will catch the pure and natural tastes which prompt the mother to contribute her portion to the waiting world. Well may she inquire why the study of entomology is so much neglected! It is true that nature presents in her lowly works, some of the most wonderful. Nothing created is more beautiful (if we may except a good and pretty girl!) than the spider! Place him under the microscope and look at his eye, his spinners, his feet with balls of hair, his plumage, not equalled by the exquisite dyes of the wood duck or the burning colors of the flamingo! Behold him work, twist his gossamer threads and fill his distaff, set his snares to entangle the unwary fly, or build his house, fortifying it on every head, and then you will kindle with a desire to know more of the lowly life which you contemn. Spiders, moths, and caterpillars, will become as loveable as humming birds, canaries, or cats, and prove the source of delightful research and contemplation. We have scattered this seed, Madam, for years, and trust some of it has fallen on genial soil. If the thoughts of the young were turned into the right channels, there would ever be found at hand enough for instruction, and amusement, for all.

UNITED STATES AGRICULTURAL SOCIETY.

The first annual meeting of this national association took place at the Smithsonian Institution, at Washington, on the 2d of February, 1853, and continued in session through two days and an evening. There were present representatives of the great national industry, agriculture, from more than half the States and territories of the Union. These gentlemen had come from the various occupations of life:—the farmer, mechanic, merchant, clergyman, physician and lawyer were there, and engaged with an earnestness and zeal that precludes doubt of future success. A common purpose, and fraternal feeling, animated every breast. The main feature—the prosperity of agricultural pursuits—was kept prominently in view, and enlisted the attention of every person present. No fancy schemes or tales of romance were entertained or propounded—no assurance of success, only through labor guided by intelligence—no promise that enlightened art should supersede the necessity of scientific knowledge, or that the application of science should ever make patient and instructed labor unnecessary.

All was accomplished that was expected. Officers were elected for the ensuing year, and such arrangements made as were deemed necessary to promote the objects of the society.

Resolutions were passed expressive of the sense of the society in relation to the action of the general government upon the subject of agriculture, and committees appointed to make respectful presentation of them to Congress. In the language of the distinguished President of the society, in the closing part of his address, we say that "cheering prospects are before us. We dwell with pleasure on the bright future."

For the New England Farmer.

THE CORE-WORM.

FRIEND BROWN:—Having seen in your own valuable paper, as well as in the columns of two or three other agricultural journals, several inquiries made during the past year, touching that pest of American apples—the *core-worm*, asking for advice and information as to a remedy or preventive; and as I have thus far, seen nothing satisfactory to myself in reply, I take the liberty of giving you my own experience in the premises, that you may lay it before your numerous readers, if you deem it of sufficient importance.

I send you the information rather than publish it myself, as ours, not being an agricultural paper, it would be less liable to be read by those whom it may benefit, than if published in the *New England Farmer*.

So far as I have investigated the matter, the *core-worms* of the apples in this country are in no particular different from the piratical apple depredators of France, England, Portugal, and South America, and are the offspring of a brown miller, somewhat larger than the mother of our common

moths, which deposits her eggs at night in the dried blow of the apple, when about half grown.

In the island of Jersey, a place famous for its fruit, the depredations of the "*pippin-worm*"—as they are there called—is entirely avoided by the farmers placing among the branches of their apple trees, sometime in April, tufts of pea straw, or what is better still, bean stalks, which have been kept through the winter for that purpose. In the cavities of these, the miller deposits her eggs, which in due time becomes a grub, of an altogether different character apparently, from the apple-bred offsprings of the same miller.

These grubs never enter an apple, and what few of them escape the keen observation of the black hornet or the speckled *girder*, find their way to the ground, in which they burrow, lying dormant for about ten months, when they become changed to millers in time for the next crop of apples.

I have seen in the island of Jersey, the apples from a tree unprotected by the simple precaution mentioned, literally alive with worms, while those of all the other trees in the same orchard were entirely free from the plague.

I have tried the experiment in South America frequently, with the most complete success; and as I believe the North American worm is identical with the apple-worm of other countries, I would advise that farmers generally try the experiment. It does not cost much, and if successful, is just as good as a more expensive remedy.

I am Dear Sir, very respectfully,

GEO. S. RAYMOND.

Office Northern Light,
Hallowell, Me., Feb., 1858.

REMARKS.—Thank you, friend RAYMOND, for the above. We shall try it. If it is a remedy, it is one of those simple ones which all may have.

For the New England Farmer.

CHINESE FARMING.

This oldest and most populous country in the world, if I am rightly informed, has the least supply of cattle of any other nation, ancient or modern, where agriculture has been successfully and systematically pursued. How they replenish their soil century after century, in the absence of one of the main sources of producing manures in all other countries, has long been to me a most embarrassing question, and one object in this communication is to solicit some remarks on this subject, from some of your correspondents, who are adequate to the task.

I have been told that they have the art of imparting fertilizing properties to heaps or vaults of earth, which serve as a substitute for the composts of other countries. What chemical agents they employ for this purpose may be useful for us to know.

I have seen it stated that all old lime and mortar is by them carefully preserved for manuring purposes. This policy I can understand, as I adopted it to advantage long before I read of it among this people, and was not a little gratified that I had stumbled upon a course which these ingenious cultivators from time immemorial have pursued.

The way I came to think of making use of an article so dry, and apparently dead and worthless,

was from seeing how strong a lie it would produce after being soaked in water for a short time. As lime was difficult to be procured except in casks, at too high a price for farming purposes, and as I was satisfied my land needed the article, and as a number of my neighbors were making large repairs on their buildings, I daily obtained the privilege of removing what no one accounted of any value. I soon carried off hundreds of loads, at first somewhat at a venture. Some of it I left in heaps, mixed with earth for future use; most of it, however, I spread on the land, lumps, flakes, and all, where they melted away by degrees, in the course of a few years. After this preparation, a much less quantity of other manures was needed for a good production.

A Chinaman will sometimes replaster his house sooner than he would otherwise do, for the sake of getting the old refuse for his land. But this can afford but a scanty supply, and after all, the question comes up, how have the Chinese kept their lands in a productive state, for so many centuries, with so few facilities for enriching them, which are known to us? The natural richness of the most exuberant soils will in process of time be diminished, and they must be replenished by some fertilizing process, or scanty crops will be the portion of the cultivator.

I am aware that rice is the staple article for food in China, as well as in most parts of eastern Asia, for the growth of which I believe manure is not needed, as all rice lands must not only be watered, but overflowed a portion of the year. The *modus operandi* in the growing of this crop I conclude is similar in all countries. The fields in the first place must be entirely level, and they must be accessible to water, which must be let on and off at different times, after the seed is sown. In the southern States, the rice fields are mostly adjoining fresh water rivers, where the tides rise and fall sufficiently for the supply of the fields. This is the ordinary way of growing rice in this country. But in some cases they lay up water in rainy seasons to be let on when it shall be required.

In India I am told this method is usually practiced, and in China the same course is probably pursued.

As to the growing of the tea plant, I am wholly uninformed respecting the kind of soil or dressing it requires.

But a large portion of China is in too high a latitude for the culture of either rice or tea, and the question still returns:

How have the Chinese managed to keep their lands in a productive condition for so many centuries, with so few cattle, and without the usual facilities for producing manures which are common to all other highly cultivated regions?

AGRICOLA.

ELIJAH M. REED, of Tewksbury, informs us that he is now making butter from his Ayrshire cow, and obtains one pound from *four quarts* of milk! She was on exhibition at the Middlesex Show in October last, and was then an animal of fine appearance. He did not state to us the manner of feeding in obtaining this product. One cow producing this amount must be of as much value as two, at least, ordinary cows.

*For the New England Farmer.***THE CULTIVATION OF FLOWERS.**

BY J. REYNOLDS, M. D.

Said an excellent and kind-hearted old man to me, one day, on observing some flowers in the window, "I love to see these about a house. They shew that there is good feeling within, that there is taste, a regard for the feelings of others, that the mind is not wholly wrapped up in love or self." And is it not so! Where you see a fine collection of flowers in or about a house, well trained and cultivated, and where you see the daughters, aye, and the sons too, taught to love them and watch over them and protect them from enemies and injuries, do you not feel assured that the mistress of the house is a lady of taste, that she has an eye for the beauties of nature, that she has other sources of pleasure besides money and dress and display! Do you not feel that she has a soul endowed with some of the finer sensibilities of our nature, and that she is developing and cultivating these sensibilities in her children! Do you not expect to find in the mind of the woman who has a love for these delicate and beautiful objects of nature, a nice sense of propriety, a strong and ardent love of truth, and a keen and quick perception of moral beauty! Would you not commit your daughters to the instruction of the woman who possesses a strong love for flowers, other things being equal, rather than to her who has no taste for their delicate forms, and blushing and almost speaking beauties!

I have been in the habit of associating a love for flowers, and for the more delicate beauties of nature, with all that is refined and tender and lovely in woman, and indeed, it is because there is a finer tone in the feelings of the female heart, that she so much more frequently than man possesses a keen relish for the modest pearl drops, the brilliant gems, the delicate hues, the rich, blushing tints, the beautiful commingling of light and shade, which the pencil of nature has scattered so profusely around us.

Man seizes the bolder and stronger features of the landscape—the noble tree—the lofty mountain—the broad expanse—the flowing river—the rolling wave; but woman instinctively loves the flowers. They speak to her heart, and commune with it in language of their own, of all that is tender, and gentle and kind and provident and patient and loving in nature, and she feels that her heart is made better by the sweet communion, and she is inspired by it with strength and patience and fitness for the tasks of life. They are the beautiful and most appropriate instruments employed by her kind Father above to give birth to loving thoughts in her heart, from which overflow to all around her, gentle words and the sweet charities of life.

There is nothing more fascinating to the heart of a true woman, than the cultivation of flowers. When the fondness for it is indulged, it may become a passion, and absorb time and thoughts due to other duties. But among our fair country-women, such instances are but rarely seen. The error is usually in the opposite direction. Sufficient time and attention are not given to this charming pursuit; a pursuit full of beauty and health for the body and of improvement to the mind and the heart.

Let husbands and fathers see to it that they never discourage a taste for the cultivation of flowers. Rather let them furnish all the facilities within their power. Every wife and every daughter, however lowly her lot in life, may cherish a rose or train a sweet pea or a morning glory. Let no father or husband frown upon such an exhibition of taste and love for nature, as he values a sunny smile, a cheerful tone, a gentle word, and a loving heart.

Every farmer can provide the neat border, or the warm sunny patch, (and let him not grudge the time or labor of its preparation) where the modest crocus, the lily of the valley, the sweet violet, and the gay tulip may spring up to meet the coming birds, where the mignonette—the sweet balsam, the pink and the rose may mingle their perfumes at dewy eve, and the rich, ever-varying tints of the amaranth, the dahlia, the aster and the chrysanthemum, may recall the more delicate hues and the sweeter blossoms of spring. There shall lessons of gentleness, of cheerfulness, of contentment, of love of home, be read by loving eyes, and garnered up with the heart's treasures, in the store house of memory, to be repeated around the cheerful hearth—when the wintry blasts and the drifting snows, shall have rendered alike bleak and desolate, the garden and the field. And when the frosts of age shall have whitened the locks and furrowed the brow, the sweet scenes of youth, still fragrant with the breath of flowers, shall gush up from the deep memories of the past. The influence of flowers upon the young heart is never wholly lost.

"You may break, you may ruin the vase if you will,
But the scent of the roses will hang round it still."

Concord, Feb., 1853.

J. R.

*For the New England Farmer.***BRISTOL COUNTY AGRICULTURAL SOCIETY.****TRANSACTIONS FOR THE YEAR 1852.**

No publication of this kind has impressed me so favorably as this pamphlet of seventy-two pages. The first thirty pages contains the finished address of Mr. Winthrop; which, although it may not guide the farmer in the operations upon his field, presents such general topics for reflection, in a style so chaste, that it will be read again and again with instruction. The farmer cannot fail to be encouraged in his laborious pursuit, when he finds men like Winthrop, Page, and others, ready to lend a helping hand.

Among the Reports in this pamphlet, my attention was particularly arrested, by one on "Ornamental and Forest Trees." For thirty years, I have seen premiums offered on this subject; but I have never before seen anything, that so nearly approximated to practical utility, as the suggestions of this writer. I hope they will be embodied in the State abstract, and be the means of diffusing an agreeable shade through all our villages. On page 35, I notice Mr. Leonard's crop of corn, yielding more than one hundred bushels to the acre. If such things can be done in the shallow soils of Bristol and Plymouth;—shame upon the farmers in counties with better soils, who remain content with crops of half this amount. Mr. Leonard plowed his land nine inches deep; might not this operation be one of the reasons of his good

crop! Certain am I, when land is thus plowed, and properly manured, it is better prepared to encounter the drought of August and September, than in any other way. My particular object in taking pen in hand, was to commend the neat appearance of this pamphlet; compared with many others I have seen, it is much their superior.

Feb. 4th, 1853.

P.

COUNTY AGRICULTURAL TRANSACTIONS.

PLYMOUTH COUNTY SOCIETY.—A neat volume of 64 pages; the Address was by Col. PAGE, of New Bedford.

BRISTOL Co. SOCIETY.—Address by ROBERT C. WINTHROP, Boston. Printed elegantly and contains 71 pages.

WORCESTER Co. SOCIETY.—In addition to the usual transactions, this volume contains the report of the committee on feeding stock, which we published at length in the *Farmer* last year. Address by Prof. MAPES, of New Jersey.

We thank the donors, respectively, for these pamphlets, and hope to receive them from each county in the State, as they are valuable books of reference for us through the year. We had received them from Norfolk and Essex, but they have been taken from our table.

HILLSBORO', N. H., SOCIETY.—Through the politeness of BROOKS SHATTUCK, Esq., we have the Address of Gov. BOUTWELL before this Society on September last. We give a few extracts, all we can find room for at present. Every line of it ought to be spread broad-cast before the people. We hope to refer to it again.

Agriculture is a laborious occupation, yet it tempts men of all ages and conditions from marts of business, closets of study and palaces of wealth and luxuriance, to its quiet and ennobling paths and pursuits. If your State has not made so rapid progress in wealth and numbers as some other members of the confederacy, the disparity may well be set off by the advantages of an agricultural and mechanical population whose habits and physical systems correspond more nearly with the frugality and hardihood of earlier times. Civilization is not any where an unmixed good, and though the wealth of cities may encourage a taste for literature and the fine arts, the chief dependence must still be upon the coasts of the ocean and the agricultural districts for our great men. Your state is to New England, what Sparta was to Greece.

Men are not compensated so much for the physical strength of their arms, as for the genius and power of their heads. In no country has the ignorant laborer ever been a well paid laborer, and with a reasonable approximation to truth it may be said that in no country has the well educated, industrious man ever been without the means of subsistence. And wherever the mass of laborers are ignorant, the failure of one branch of business or the loss of a particular crop, is sure to be fol-

lowed by distress and famine. But in an intelligent community such a calamity is only partial, temporary, and before the frosted leaf decays industry and competency return. There is a vitality and confidence and intelligence which enables its possessor to rise above the ordinary ills of life. Talent and genius are every where appreciated. In Ireland, a man suited to take charge of a manufacturing establishment will command as great wages as in England. But a country can only be truly prosperous when its entire laboring population is well educated, for there is no employment for which an ignorant man is so well fitted as an intelligent man. It no doubt has happened that the education of the schools, and more especially the education of society, has tainted the public mind with the idea that labor is discreditable. *Labor is honorable.* It should be so regarded and taught everywhere. Not this labor or that only, but every form and variety which adds to the wealth, or promotes the comfort of society. He only is discredited whom a false pride has raised above honest industry, or he who is not qualified for the sphere he has chosen. Parents sometimes express the hope that their children may live without work. Hope so no longer,—but hope only that your children may live by work.

In view of the progress which the human mind has made we may say that there is no limit to its capacity. It has not numbered the hairs of the head, but worlds it has weighed as in a balance. The powers of nature, far from being exhausted, are not even known. Nothing is created in vain. Everything we behold in some way will minister to the wants of men. The work of creation goes on. The mountains of rock and the deserts of sand shall yet develop their wealth. The generations and races of men succeed each other, but the earth's capacity is not diminished by their existence. And what a beautiful provision of nature is this, that the intelligent cultivation of the land does not exhaust but enriches it! Thus a farmer for fifty years may sow and reap and gather into barns, his products annually increasing and nature freely and continually giving new pledges for the bounties of the future. It is only the indolent or ignorant man who exhausts nature. But the farmer as well as the mechanic needs to be educated.

TO CORRESPONDENTS.

During the winter season we usually receive liberal contributions from our intelligent correspondents. Such is the case at present. We are thankful for their attentions, and will publish as fast as our space will permit, exercising our judgment as to the most appropriate time for each. Many of you will still find opportunity, during the blustering March, to add to the store for summer use.

To J. D., Ontario, Ohio. We have known partially decayed potatoes fed to cows, without injury, a few at each feed. You can ascertain their value by using them for a time with one or two of your cows. If they are generally decayed, they cannot be of service, and might be injurious. Tasting the milk will detect an unusual flavor if there is any; if the milk has it, of course it would be imparted to the butter.

THE AMERICAN CRAB APPLE.

We manifest our appreciation of friend Fowler's kindness in sending us specimens of the *American Crab Apple*, the first we had ever seen, by procuring the above engraving, which is a perfect portrait. The following description is from Mr. Fowler.

DEAR SIR:—I send you some specimens of the species of wild apples, found in the greatest abundance in the more southern portion of our union. It is peculiar to this country, being distinct from the common apple we cultivate, this being found in the temperate parts of Europe and Asia. It is indigenous in the Western and Middle States, and does not occur in Massachusetts. It is first seen in New York, which is probably not far from its northern limits. It would probably be an interesting tree in the garden, being distinguished for its dwarfish habit, its beautiful rose-colored flowers, diffusing a delightful odor all around, and its green fragrant fruit. It can be propagated from seed, or by budding, or grafting it upon the stock of the common apple tree. The fruit, as you will perceive, is small, and very sour, but it is capable of being made into a fine preserve with the addition of sugar.

Yours, &c., S. P. FOWLER.

Danversport, Jan., 1853.

Young persons often err grievously, when they suppose certain practices to be safe because others have pursued them without apparent harm. For many men of fair exterior suffer from infirmities known to few. Those who cite their example would often be dismayed if they knew their condition.

For the New England Farmer.

BIRDS OF NEW ENGLAND.

THEIR PAST AND PRESENT HISTORY....No. 2.

BY S. P. FOWLER.

The belief, that swallows became torpid at the approach of winter, and buried themselves at the bottom of ponds, belongs to the past history of our birds, being very generally believed by ornithologists, previous to the nineteenth century.—Mr. Foster, in his "Natural History of Swallows," says, there is perhaps no subject in natural history, which has more engaged the attention of naturalists, in all ages, than the brumal retreat of the swallow. Neither is there any subject, on which more various and contrary opinions, have been entertained.

The reader may learn the interest which the subject of the winter retreat of the swallow has excited, when he reflects, that few natural historians, from the time of Aristotle to our days, have omitted the discussion of this subject. It has frequently been alluded to, by the ancient bards; and even poems have been written upon it. In the library of Sir Joseph Banks, is a curious one, in Latin hexameters, written in Holland, on the occasion of a swallow being found torpid, in an old tree. In Prussia, and some of the northern countries, was the question of the place of their retreat considered of so much importance, by some naturalists, that persons, who asserted themselves to have found them torpid under water, were put to their oath, or induced to make affidavits, and give written documents, importing the particulars of the fact. The periodical journals were full of the controversy, about their place of retreat; and upwards of a hundred letters on the subject, were

published in the *Gentleman's Magazine*. We will now give the opinion of old European writers on the subject of the winter retreat of swallows.

Kalm thought that swallows generally migrated from the temperate climates of Europe; but that those found in the more northern regions, partook of the wintry torpors of some other polar creatures. Klein was decidedly of opinion that chimney swallows wintered in the water, and sand martins in their holes, in the banks of the rivers. Linnaeus asserts that chimney swallows and martins immerse themselves in the water in winter; but supposes that swifts lay concealed in holes, in church towers, and other secure places. Pontoppidan gives it as his belief, that swallows spent the winter in water; and asserts that they are frequently taken out of that element, in large masses, by fishermen, in Norway and other northern countries. Daines Barrington supposed that the chimney swallow remained during winter, immersed in water; but that the martin lay hid in cavities of rocks, old towers, and other secluded retreats, in support of which opinion, he adduces a great number of facts. Pennant believed that the bulk of each species migrated; but admits that some individual birds may have occasionally been found torpid in winter; in which opinion, Latham and White, and in fact, most naturalists of their time, appear to have concurred. The earliest opinion, which we have been able to trace, is given by Olaus Magnus, archbishop of Upsal, in Sweden, published in 1555.

"From the northern waters," says the archbishop, "swallows are often dragged up by fishermen, in the form of clustered masses, among the reeds from the bottom." Etzmüller, professor of Botany and Anatomy at Leipzig, a century after Olaus, gives his personal testimony to the circumstance. "I remember," says he, "to have found, more than a bushel measure would hold, of swallows, closely clustered among the reeds of a fishpond, under the ice, all of them to appearance dead, but the heart still pulsating." Baron Cuvier asserts of the bank swallow, as well authenticated, that it falls into a lethargic state during winter, and even that it passes that season at the bottom of marshy waters.

In the dissertations read before the Academy of Upsal, the submersion of swallows was received in Sweden as an acknowledged fact. Such were the opinions entertained by many of the distinguished naturalists of Europe, in regard to the retreat of swallows in winter. We may add that in Germany, a reward of an equal weight in silver, with the birds thus found, was publicly offered to any one, who should produce swallows, thus discovered under water, but as Frisch informs us, nobody ever claimed the money. The subject of the torpidity of swallows, has attracted the attention of naturalists, in our country. We find an article on this subject, in the 1st Vol. of the *Memoirs of the American Academy*, page 494, entitled, "A Letter on the Retreat of House Swallows in Winter, from the Honourable Samuel Dexter, Esq., to the Honourable James Bowdoin, Esq., Pres. A. A.

Dedham, June 3d, 1783.

DEAR SIR:—Among more important branches of natural history, with which you are conversant, ornithology cannot have escaped your notice. I know it has been a problem among naturalists, whether certain species of birds emigrate in au-

tumn, to distant countries, and return in the spring, or remain with us during the winter, in a torpid state; and that the former opinion has generally prevailed. When therefore, I acquaint you, that I have adopted the latter, with respect to the *house swallow*, you will justly expect that I give you substantial reasons, for differing from so many, who have maintained the contrary. The late Judge Foster, of Brookfield, a year or two before his death, assured me, that he saw a certain pond drained, about the season of the year, when the swallows first appear. The business being effected, and the weather fair and warm, he, with several others, observed a rippling motion in many parts of the emptied hollow; which on a near inspection, they found to be occasioned by a multitude of swallows, endeavouring to disengage themselves from the mud, which was scarcely covered by the shallow remains of water.

I shall now mention some other facts, which render it probable, that this sort of swallows sink into ponds and rivers, in the fall of the year, and lie there, benumbed and motionless, until the return of spring. You know, Sir, that my house is near a large river. This river is, in many parts, shallow, and has a muddy bottom. A former neighbour of mine, a plain, honest and sensible man, now deceased, who lived still nearer the river, used frequently to say to me, as the warm weather came on in the spring, "it is almost time for the swallows to come out of the mud, where they have lain all winter." He repeatedly assured me, he had, in the autumn of many years, seen great numbers of them, on one day only in each year, and nearly about, but not always on the same day of the month, sitting on the willow bushes, [which, by the way, they are not wont to roost upon at other times] on the borders of the river, a little after sunset;—that they seemed as if their torpidity had already begun, as they would not stir from the twigs, which, by the weight of the swallows, were bent down almost to the water; and that although he had never seen them sink into it, yet he had waited till it was so dark, that he could not discern them at all; and doubted not of their immersion, any more than if he had been a witness of it; for he had never observed any flying about afterwards, till the return of spring. He added, that if, as he wished, I would carefully look for their resurrection, he believed it would not be in vain. Altho' I paid little regard to it, for some years, yet I followed his advice at length, and watched for their appearance several seasons, as carefully as I could. I have not indeed beheld them rising out of the water; yet I and my family have, in more years than one, seen, at the proper time in the spring, very large flocks of them, in my own, and in my neighbour's land, so near the margin of the river, that from that circumstance, the appearance of their feathers, and their being unable to use their wings as at other times, we concluded, they were newly emerged from the water. When they attempted to fly, they could not reach above eight or ten yards, before they settled to the ground, and then might be drove about, like chickens.—They appeared unwilling to be disturbed, and, if not frightened by some noise or motion, would cluster together, seeming to want to rest themselves, as if feeble, or fatigued. They were not entirely recovered from their stupor,—there was

a viscous substance on and about their wings, or they were too weak to fly away. In addition to the foregoing, I can assure you, on the most credible testimony, that there have been more instances than one of a pickerel's being caught in this river, at the season of the coming of swallows, with one or more of those birds in its belly.

I am, with the sincerest esteem, Sir, your most obedient servant,
SAMUEL DEXTER.

Doct. Williams, in his History of Vermont, Vol. 1st, page 140 says, that at Danby in this State, the inhabitants report, that swallows were taken out of a pond in that town some years ago. A man was engaged in the winter, to procure the roots of the pond lily, for medicinal purposes.—Among the mud and roots, which he threw out, several swallows were found inclosed in the mud; alive, but in a torpid state. The account is not doubted among the inhabitants; but I have not the testimony of any person who saw these swallows. It has been doubted by some able naturalists, whether it is possible for the swallow to live in such a situation. I saw an instance, which puts the possibility of the fact beyond all room for doubt. About the year 1760, two men were digging in the salt marsh in Cambridge, Massachusetts: on the bank of Charles river, about two feet below the surface of the ground, they dug up a swallow, wholly surrounded and covered with mud. The swallow was in a torpid state, but being held in their hands, it revived in about half an hour. The place where this swallow was dug up, was every day covered with the salt water; which at every high tide, was four or five feet deep. The time when this swallow was found, was the latter part of the month of February, but the men assured me, they had never found any other swallows in such a situation.

The species called the house or chimney swallow, has been found during the winter, in hollow trees. At Middlebury in this State, continues Dr. Williams, there was a large hollow elm, called by the people in the vicinity, the swallow tree. From a man who, for several years, lived within twenty rods of it, I procured this information. He always thought the swallows, tarried in the tree, through the winter, and avoided cutting it down, on that account. About the first of May, the swallows came out of it, in large numbers, about the middle of the day, and soon returned. As the weather grew warmer, they came out in the morning with a loud noise, or roar, and were soon dispersed. About half an hour before sundown, they returned in millions, circulating two or three times round the tree, and then descending like a stream, into a hole about sixty feet from the ground. It was customary for persons in the vicinity, to visit this tree, to observe the motions of these birds. And when any persons disturbed their operations, by striking violently against the tree, with their axes, the swallows would rush out in millions, and with a great noise. In November, 1791, the top of this tree was blown down, twenty feet below where the swallows entered.—There has been no appearance of the swallows since. Upon cutting down the remainder, an immense quantity of excrements, quills and feathers were found; but no appearance or relics of any nests.

Another of these swallow trees was at Bridport. The man who lived nearest to it gave this

account. The swallows were first observed to come out of the tree, in the spring, about the time that the leaves first began to appear on the trees. From that season, they came out in the morning, about half an hour after sunrise. They rushed out like a stream, as big as the hole in the tree would admit, and ascended in a perpendicular line, until they were above the height of the adjacent trees; then assumed a circular motion, performing their revolutions two or three times, but always in a larger circle, and then dispersed in every direction. A little before sundown, they returned in immense numbers, forming several circular motions, and then descended like a stream into the hole, from whence they came out in the morning. About the middle of September, they were seen entering the tree, for the last time.—These birds were all of the species, called the house or chimney swallow. The tree was a large hollow elm, the hole at which they entered, was about forty feet above the ground, and about nine inches diameter. The swallows made their first appearance in the spring, and their last appearance in the fall, in the vicinity of this tree; and the neighboring inhabitants had no doubt but that the swallows continued in it during the winter. A few years ago, a hole was cut at the bottom of the tree, and from that time, the swallows have been gradually forsaking the tree, and have now almost deserted it.

The following account from Nathan Rumsey, Esqr., of Hubbardton, is more circumstantial and conclusive. "Sometime in the month of March, A. D. 1786, when the snow was deep on the ground, I was making sugar in the town of Hubbardton, with the assistance of some boys. The boys informed me, that they had discovered a large number of birds, flying out from a tree. I went myself to the tree, and found that the birds were swallows of the chimney kind. The tree was an elm of a large size, and hollow fifty or sixty feet from the ground. Remaining for several days in the vicinity I observed the swallows in the fore part of the day going out, and in the latter part of the day going in at the same place. I chopped a hole in the tree, from whence I could see through it, to the place where they went out, and found that they extended from fifty or sixty feet in height near down to the ground; and appeared to be sticking to the tree, as thick as they could be placed, and that the sides of the cavity were every where lined with them; a considerable part of them seemed to be in a torpid state." From these accounts, says Doct. Williams, I am led to believe that the house swallow, in this part of America, generally resides during the winter in the hollow of trees; and that the ground swallows find security in the mud, at the bottom of lakes, rivers and ponds.

S. F. F.

Danversport, Jan. 4th, 1853.

[TO BE CONTINUED]

THE GRUMBLER.—Grumble! grumble! grumble! continually! O what a grumbler! He grumbles all the time, night and day, week in and week out. Whenever and wherever you meet him, it is grumble, grumble, grumble! Always some foot out of joint, some shoe down at the heel!

Always something to grumble about. If he has nothing, or nobody to grumble at, he will grumble

about himself. He will be sure to grumble any how.

Man, do smooth down your face a little, smile now and then; you look sour enough to turn milk to cheese! Awful!

O what a wretchedly miserable companion is one of these perpetual grumblers! Run! run! take to your heels! run!—*Golden Rule.*

STATE BOARD OF AGRICULTURE.

MET JANUARY 25, 1853.

The meeting was called to order by the Secretary, Mr. WALKER, who stated that the first business of the Board was to elect a chairman for the ensuing year, when JOHN H. CLIFFORD, Governor of the Commonwealth, was unanimously elected.

Mr. GRAY presented copies of his essay on orchards.

The reports of several of the County Agricultural Societies were presented to the Board.

Mr. WILDER presented a dried specimen of a plant covered with seed, which he had received from A. H. ERNST, late President of the Cincinnati Horticultural Society. The plant is the *Cajanus flavus*, near allied to the Lupines. The seed was introduced into the country two years since by one of our ships, which found a Japan vessel in distress, from which the crew, with part of the stores, were taken and carried into San Francisco. This seed was among their provision stores, and a small quantity was brought to Alton, Illinois, by Dr. EDWARDS, and grown by Mr. JOHN H. LEA, a careful horticulturist of that place. The plant presented grew in Cincinnati last summer. Mr. WILDER read a statement from Mr. TESCHMAKER, which describes this new plant as follows: "Shrub erect, pubescent, native of the East Indies, Amboyna, Japan, &c. The seeds are good to eat, and when young, very delicate.

"The *Cajanus flavus* or Pigeon Pea, is cultivated in most tropical countries. In some parts of the West Indies it serves as a fence to sugar plantations. In Martinique, the seeds are generally preferred to peas. In Jamaica, they are much used for feeding pigeons, and are there called the Pigeon pea, and the whole plant with its seed is much esteemed for fattening hogs and cattle.

"The round seed, when soaked for about an hour in hot water, takes exactly the form and appearance of the common white bean; it gets very tender and is good to eat, being quite mealy; it is oily, and this accounts for its quality of fattening cattle. It is doubtful to me whether there is length of hot weather enough to ripen the seeds here, and at all events it would not stand the winter—but if the seeds ripen well here it might be made an annual produce."

The seeds were distributed among the members.

Mr. WILDER also presented an Essay on Education by Dr. JOHN SPARR, of North Dartmouth,

Mass., which was received and ordered to be placed on the file of the Board.

Mr. PAGE reported on the Franklin and Plymouth County Societies.

Mr. NASH reported on the Hampden County Society.

Mr. SPRAGUE read a report upon Neat Cattle.

A committee on Publication was appointed, consisting of Messrs. WALKER, WILDER, PROCTOR, FRENCH and PAGE.

Mr. PROCTOR read a report on the Culture of Vegetables as farm products.

Mr. FRENCH reported on thorough draining and subsoil plowing.

The Secretary, Mr. WALKER, read the annual report required by act of the Legislature, and which is to be laid before that body.

The committee appointed to nominate a suitable person to act as Secretary of the Board, reported the name of CHARLES L. FLINT, Esq., of New York.

The vote was taken by ballot, and Mr. FLINT was elected, and the Secretary was directed to notify him of his election.

Messrs. WALKER and SMITH were elected a Committee on Accounts.

The paper of Dr. HITCHCOCK upon the forming of *Farmers' Institutes*, and the resolution of Mr. NASH, upon the subject of a State Chemist, were referred to a special committee consisting of Messrs. PROCTOR, BROWN, HITCHCOCK, NASH, and WALKER, the acting Secretary, to be reported on at the next meeting of the Board.

And after an arduous session of about nine hours, the Board adjourned, *sine die*.

For the New England Farmer.

PEA FODDER.

It is generally believed by farmers, that the haulm of the pea crop is, if not wholly, very nearly valueless as an article of food for stock.—Such, however, is not the fact. I have made a fair and impartial trial of pea fodder as a feed for cows, and find that it possesses high value for this purpose. Last June there was on my farm a small tract of land, on which there grew nothing but red sorrel, and which I could not prepare properly for a more exhausting crop, as I had previously appropriated all my manure to other crops. Not wishing, however, to let it remain entirely idle, and being desirous of limiting, as far as circumstances rendered the result practicable, the growth of the sorrel, I had the land carefully plowed, and after spreading a few bushels of lime and plaster on the surface, previous to harrowing, sowed it in peas. As soon as the vines had podded, and about one-half of the pods were filled, I had the crop carefully mowed and made in a bright day, turning them frequently to ensure the benefit of the sun's rays, and throwing them into small bunches at night, in order to prevent the deteriorating effects of the dew and rain. On packing them away in the barn, a small quantity of salt was sprinkled over a part of the mass, but

I think without any essential advantage to the fodder. It appeared to me, indeed, very much like adding perfume to the rose, but the suggestion having been made by a neighbor, I was induced to make the trial. I did not perceive that the portion of the crop which received the salt, was any more acceptable to the cows than that which had none. It is true the animals were liberally supplied with salt in its natural state, a box being kept full in the yard during the winter, and to which they had, at all times, free access. It is possible and quite probable that, under a different method of treatment, the salted fodder would have been preferred. By permitting the peas to ripen, and threshing them, the value of the straw or *haulm* will of course be materially lessened for feeding purposes; it will be dry and unsucculent, and unless there be warm and very dry during the later stages of its growth, there will be an unsavory taste, and a very unpleasant smell engendered, which it will be extremely difficult, if not impossible, to remove. But when cut in the manner presented above, the driest vines may be used as food. The most economical method of using them, however, is to prepare them by chaffing, and mix them with meal and other sapid viands. Rased roots make an excellent accompaniment, and if used constantly on the farm, will aid, very essentially in effecting a profitable appropriation of much that would otherwise be lost.

H. D. W.

For the New England Farmer.

THE FARMER.

BY D. W. C. PACKARD.

O, noble is the farmer's lot,—
That man of giant frame;
His big heart knows no serditi spot—
No vices dim his fame.

His brow, it wears no bloody bays,
Nor springs his fame from Death;
But quickening Nature bears his praise
Upon her balmy breath.

His hand, it is an honest hand,
And brown it is with toil;
Then let the farmer take his stand,
The sovereign of the soil.

The forests bow to meet their lord—
The waving fields rejoice;
By countless herds he is adored—
The ruler of their choice.

Then let the farmer take his stand,
The sovereign of the soil,
And every lip in every land
Shall bless the farmer's toil.

N. Bridgewater, Jan. 7, 1853.

For the New England Farmer.

A YOUNG FARMER.

GENT.:—I am 6 years old; I send \$1.00 for the
N. E. Farmer, monthly. Yours, J. S.
New Market, N. H., Jan. 13, 1853.

REMARKS.—If we can find our way to the hearts of the young men and women, and to those of the children, even, we shall feel sure of success. If they become imbued with the right spirit and doctrine, the next generation will be right. We are often encouraged with applications similar to the

above, and earnest inquiries from the young interested in agriculture.

For the New England Farmer.

CUTTING FODDER FOR STOCK.

BY HENRY F. FRENCH.

"Do you think it will pay to cut fodder for stock?" is the question often proposed. The general impression among well-informed farmers seems to be that it will.

The report from the Worcester County Society on feeding stock, published in the *N. E. Farmer* of July and August, 1852, seems to have been taken as conclusive on the subject. So far as the opinions of that committee are concerned, they are entitled to great respect, as are the opinions of many persons named in their report.

A premium had been offered for "the best experiment in determining the advantages or disadvantages of cutting hay as food for stock," and it is to the experiments offered for the premium, that I wish to call attention.

However correct may be the conclusion of the committee, from all their premises, it seems to me that the experiments themselves are far from satisfactory as evidence of the profit of cutting good hay, or any fodder that cattle will eat up entirely, *uncut*. Before analyzing the results of those experiments, I had the impression that a great saving in the quantity of food actually consumed was made by cutting it; but those experiments, as published, show that the cattle on which the trials were made, consumed a very little more cut, than *uncut* hay, in the same number of days.

The conditions of the trials were in part as follows:—"The trial to be made with at least two animals—the time of trial to continue at least eight weeks, divided into periods of two weeks each. One animal to be fed with *cut*, when the other is fed with *uncut* hay, and the feed of each to be changed, at the expiration of each two weeks."

Four experiments are reported. The first by Mr. Demand, on two cows not in milk, both expected to calve in about two months. The result is briefly this. Cow No. 1, gained in the eight weeks, 61 lbs. She gained 38 lbs. on *cut* hay and 23 lbs. on *uncut*. She ate 611 lbs. of *cut* and 563 lbs. *uncut* hay.

Cow No. 2 gained in all, 59 lbs.; on *cut* hay 26 lbs.; on *uncut* 33 lbs. She ate 560 lbs. of *cut*, and 586 lbs. *uncut* hay. Mr. Demand's two cows then ate in the whole time 22 lbs. more cut than *uncut* hay, and gained 8 lbs. most on the *cut* hay. Calling the hay worth \$10 per ton, he lost eleven cents' worth of hay. Calling the weight gained, worth four cents per lb., he gained 32 cents' worth of weight. So, on the whole, he got 21 cents for the trouble of cutting the fodder of two cows four weeks, which, considering the wear of the machine, is rather poor pay. One cow, it seems, gained most on *cut*, the other on *uncut* hay.

The second experiment was made by Mr. Dodge on two steers. The near steer gained in the 8 weeks, 50 lbs. weight. He gained 55 lbs. on the *uncut* hay, and lost five pounds on the *cut* hay. He ate 447 lbs. *cut*, and 469 lbs. *uncut*. The off steer gained in all, 80 lbs. He gained 75 lbs. on the *cut*, and 5 lbs. on the *uncut*. He ate 469 lbs. *cut*, and 480 lbs. *uncut* hay.

On the whole, Mr. Dodge gained 33 lbs. of hay, worth 17 cents, and 10 lbs. weight, worth 40 cents, making in all 57 cents for the trouble of cutting hay for a yoke of steers 4 weeks, or about two cents per day.

In each of the foregoing experiments, it will be seen, that one animal gained most on the *cut*, and the other on the *uncut* hay. They seemed to take sides on the question with considerable decision.

The *third* experiment, by Mr. Lincoln, gives a better result for the hay-cutter. His cow *Beauty* gained in the 8 weeks 125 lbs. She gained 100 lbs. on the *cut* hay, and 25 lbs. on the *uncut*. She ate 685 lbs. *cut*, and 668 lbs. *uncut* hay. His cow *Cherry* gained in all 35 lbs; 30 lbs. on the *cut*, and 5 lbs. on the *uncut* hay. She ate 464 lbs. *cut* and 462 lbs. *uncut* hay in all. The two gained 100 lbs. more on the *cut* than on the *uncut* hay, in the whole, and ate about 19 lbs. more *cut* than *uncut* hay. Upon our former estimate, Mr. Lincoln gained four dollars' worth of weight, and lost but 9 1-2 cents' worth of hay. This result alone would indicate that it pays to cut the hay. As to milk, Mr. Lincoln's cows gave 22 lbs. more milk on the *cut*, than on the *uncut* hay, an item of some 30 cents more to be carried to the credit of the hay-cutter. The results were not, however, uniform as to the milk, for *Beauty* gave 45 lbs. more on the *cut* hay, and *Cherry* about 23 lbs. more on the *uncut*.

The *fourth* experiment, by Mr. Hawes, was with a yoke of oxen. The *near* ox gained in 8 weeks, in all, 126 lbs. He gained 120 lbs. on the *cut*, and 6 lbs. on the *uncut*. He ate 1078 lbs. of *cut* and 1028 lbs. of *uncut* hay.

The *off* ox gained, in 8 weeks, 104 lbs. He gained on the *cut* hay 17 lbs., on the *uncut* 87 lbs. He ate in the 8 weeks, 1028 lbs. *cut* and 1078 lbs. *uncut* hay. On the whole, the two gained 44 lbs. most on the *cut* hay, and ate precisely the same quantity of cut and uncut. The results here, again, were different, in the two oxen. One gained the most on the *cut* hay, and the other most on the *uncut*. One ate more *cut* than *uncut*, while the other ate most of the *uncut*.

Mr. Hawes extended his trial longer; but the results give no new light on the subject. By my former mode of reckoning, he gained 176 cents' worth of weight in his oxen, by cutting their fodder four weeks.

On the whole, the results of these experiments are not very satisfactory. They are lacking in uniformity, in almost every particular. They should be repeated, and it seems to me, under different regulations. Two weeks is not a term long enough, for each kind of food. The food of *this* week may make the *fat* of next week. Cows, heavy with calf, are likely to gain in weight, on almost any food, and their weight could hardly be expected to vary rapidly by change of food two weeks at a time, except as their bowels might be full or empty. It is proper to say, that all the cattle referred to received other food, either roots or meal, during the experiments, so that it must not be inferred that the quantities of hay above stated, are alone sufficient food for such animals.

Having glanced, thus, at these experiments, I will suggest what seems to me the most reasonable views on this subject. I cut all my fodder for my horse and cows, this winter, not because I suppose that there is any nutriment added to a lock

of hay by cutting it into inch pieces, nor because Nature has in general furnished animals with *hay-cutters* of their own, insufficient properly to masticate their food. Horses have powerful grinders, and usually chew their hay sufficiently. An experiment reported in the Patent Office Report for 1851, at page 71, shows, that the food of a horse, fed on *uncut* hay, was equally exhausted of its nutritive properties, in passing through the animal, as when fed on *cut* hay.

Ruminating animals, if they swallow their food hastily, may chew it over again at their leisure, and this seems to be a very innocent and becoming recreation for a cow that has nothing else to do. The advantages of cutting fodder, I apprehended, are these:

1st. Working cattle and horses thrive better on cut fodder, because *they eat it in less time*, and have more time for rest. And besides, they are not so liable to lose their breakfast, by the oversleeping of the teamster.

2d. Old animals, whose "grinders are few," can eat chopped food more readily.

3d. Chopped hay can be readily *measured*, and the animals receive a more *regular allowance* than when fed with long hay.

4th. No hay will be *wasted by over-feeding*, as your boys will be too lazy to cut more than is needful, whereas common hands will always *fill the rack* more or less, if they pitch the hay to the animals.

Lastly, and most important of all, if we have corn stalks, butts, fresh hay or coarse clover which cattle will never eat entirely up, such fodder may be passed through the hay-cutter, and they will eat it much more readily. At the present price of hay, (about twenty dollars a ton,) grain is cheaper than good hay for cattle. By cutting coarse fodder into a box, moistening it, and adding a small quantity of meal, or shorts, much may be consumed to advantage, that is usually thrown into the yard for manure.

No good farmer will be long without a hay-cutter. Whether it be worth his while to chop all his hay or not, may be doubtful, but he will every year find occasion for its use, for one or more of the reasons already suggested.

This matter of chopping fodder is another of the thousand, that needs careful investigation at the hands of Boards of Agriculture, and upon our anticipated Model Farms.

H. F. F.

For the New England Farmer.

LIVE FENCES.

MR. EDITOR:—Will you or some of your correspondents, please give, through your paper, some information upon live fences; dead fences are becoming expensive in this part of the country, and we wish to know if live fences are cheaper, and if so, what is the best kind; where the seed can be had; at what price; the time and mode of planting, and the whole mode of operation, and you will oblige,

D. H. L.

Hollis, N. H.

REMARKS.—Will some of our correspondents reply to the above? The subject is becoming of more and more importance as the railroads are extended through the country, and the population and building increases.

For the New England Farmer.

FARMING INTERESTS NEGLECTED.

MR. S. BROWN:—I have read with pleasure, and I trust profit, the *Farmer* the past year. In this vicinity there has been little done beyond what the fathers and grandfathers used to do in the farming line. There is not a subsoil plow in this town, nor have I ever known any of our farmers to plow more than six inches deep. The farming interest is far behind what it should be. There is a great deal of poor, worn-out land in this region of country, and few are doing but little towards improving their farms, while the greater part are just living from hand to mouth, as the saying is. Farming is so unprofitable, that most of our young men seek some other employment for a living, and those that choose to farm it for a living, are in most cases driven to the necessity of hiring out several years to get something to buy land with; and then they must go to the West where land is cheap, or go without a farm. (a) The reason is, that those who have land which could be spared as well as not, hold it so high that it would take quite a fortune to buy a farm here.

The south half of Woodstock numbers about thirty less families now, than it had in 1800, that were then farmers. The western fever has carried off a good many, but the worst feature is, their lands have fallen into the hands of the rich, or those who will keep them at all hazards as long as they can get enough from them to pay the taxes on the land, unless they can get an extravagant price for them; this is the reason why Vermont does not keep her population good, and increase. (b.) There are, at the present time, some signs of reform; if nothing more, some are inquiring if there cannot be something done to restore our worn out lands. There are but few that have any faith in what they call *book-farming*; we have no farmers' club, and only a few interest themselves enough to take or read an agricultural paper. But the great work *must* and *will* go ahead; necessity will bring our farmers to the work before long, or they will have to abandon their lands.

I had no thought of writing but a very few lines when I set down. It will give you, at least, something of a picture of what is, and has been, doing here in relation to agriculture. Enclosed is \$1 for the *Monthly* for 1853, and with my best respects to you, dear sir, and your coadjutors. I hope you may all enjoy a long, useful, and happy life, and that through your instrumentality and the spread of scientific truth, thousands may be turned from ignorance to knowledge, and prove blessings to their race.

I should like to ask what time to cut those fruit sprouts to be stuck in a potato before planting, and how long before planting, or whether they must be planted immediately after cutting. (c.)

CEPHAS RANSOM.

Woodstock, Vt., Jan. 15, 1853.

REMARKS.—(a.) Certainly. The young man who wishes to purchase land must first earn the money to purchase with, unless he is otherwise supplied. It is just so with the merchant, and mechanic. But they take a different course,—they hire cash, or start upon credit, and if they succeed in business, pay up, if not, they fail. So many of our

best clergymen and lawyers, having the stamina in them, and being determined to "go ahead," obtain the means of acquiring an education partly by teaching and partly by loans or credits. The young farmer, in this respect, stands on as favorable ground as others.

(b.) In this particular, other professions have great advantages over the young farmer. There is no monopoly in learning, none in carpenter's or other tools; but the evil complained of by our correspondent often operates injuriously to the growth and prosperity of a town. There can be no question, it seems to us, but that small farms and high cultivation are the most profitable for all.

(c.) Last spring we made the experiment of inserting scions in potatoes and setting the latter in the ground. The suggestion was made in some foreign agricultural work. The potatoes grew and gave us a small crop, but none of the scions lived. One experiment, however, is not a fair trial, and as the cost is very trifling, we intend to try again. Cut the sprouts or scions about the first of March, and keep them moist on the bottom of the cellar, and set them as soon as the ground is warm in the spring.

FARM LABOR—ITS MISAPPLICATION.

It is no uncommon thing to hear farmers complaining of the small remuneration they receive for their labor, when compared with that received by other classes of society. I have been led to reflect upon the subject, and have come to the conclusion, that if these complaints are well founded, it must be because our efforts are not put forth systematically; because they are not governed by intellect—in a word, because, like Cyclops, we are content to "go it blind."

I find that labor is the most expensive item in the management of a farm, and I presume this will be admitted by all practical men.

Now, whenever, and wherever the amount of manual labor can be lessened either by more judicious application, or by the substitution of machinery, the profit of the farm must be increased. We see the manufacturer continually upon the alert to adopt means, whose end shall be the *saving of labor*, and consequently the increase of his profits.

Now, farmers of the State of Maine, cannot we profitably abridge human labor, in many of the operations of the farm? Cannot we produce fifty bushels of corn on an acre, with an outlay of three-fourths of the labor usually applied. Cannot we harvest our hay, and grain, with one-fourth less expense, by the (substitution of machinery,) than we now do. In a word, how many farms are there in the State, on which the same amount of crops might be annually raised, as at present, with three-fourths of the outlay of human labor?

How many thousands, (might we not say millions,) are annually lost to the State, by the injudicious application of the motive power. Let farmers think of these things! Let them remember that if they would not always be like Isaac, "a strong ass crouching down between two burthens," they must rouse up and use their *intellects*, as well as their "huge paws" and brawny shoulders.

That it is possible to make as great an advance upon the present mode of agricultural practice, as has been already effected in manufactures, by the substitution of the spinning frame, and power loom, for the handloom and wheel of "auld lang syne;" I fully believe, judging from the testimony which has been adduced, I cannot but believe, that the man who cuts 40 or more tons of hay in a season, on a tolerably smooth bottom, would find his interests promoted, by the use of one of the improved mowing machines. The cost of one is about \$105, as I learn. This will cut its 10 or 12 acres a day, as much as 5 or 6 men ordinarily mow, at a cost of as many dollars, exclusive of board, and the latter item be reckoned at less than 25 cts. each per day. Then we think it will be fair to assume that the expense of mowing ten acres of good grass with the scythe, will average in the State twelve dollars and a half.

Now, everybody knows that during the hay harvest, labor is scarce as well as dear; and therefore, those who have considerable hay to cut, begin at least one week before the grass has attained the state most fitting; and they continue haying at least one week after this period has passed.—Perhaps, it will be a safe calculation, if we assume that those farmers who cut 48 tons of hay, cut 10 of it at such a period in the season, (either before it has attained maturity or after that period has passed,) that one-half of its nutritive substance is lost. Assume that this ratio will hold good, with farmers in this State, generally, and we have a loss in the hay crop of one-sixth, just because it is cut out of season.

If I have assumed too large a per centage of the crop as being cut at an improper season, the reader can readily perceive the error, and make the proper estimate himself.

According to the above assumption, the farmer who cuts 48 tons of hay, by a loss of one-half of the nutriment contained in 16 tons, actually wastes 8 tons; wastes it just as much as though he pitched it into his barn yard, instead of into his hay mow.

These 8 tons would be worth, ordinarily, \$6 a ton, to feed to stock; amounting to \$48 loss annually. Would it not be good policy for the farmer to stop this leak; if it can be done by employing machinery, which never sweats, never tires, even though the sun pours forth its hottest rays. Some will be ready to answer in the affirmative, provided the machinery will work well.

The statement was sent forth to the world, that at the great trial of those machines in New York, last year, some two or three of them did work well on a rather rough bottom, and a light crop, (only about half a ton to the acre) of wire grass, which every farmer knows to be one of the most difficult to cut.

I need not mention the saving, effected in the substitution of horse labor for manual, in raking, because the subject is familiar to all.

For four years past, we have raised annually, from 75 to 130 bushels of Indian corn, averaging about fifty bushels to the acre, which has been produced without manure in the hill, it being all spread upon the land when first carted from the barn, and turned under with the plow some 8 inches. Sometimes I have re-plowed the land in the spring; at others, not. The land which I have thus treated, has been river interval and light loams, and gravels.

Another great misapplication of labor is, in cultivating two acres of land to produce the crop which should be obtained from one. If we assume that thirteen days labor are required, in plowing, planting, and hoeing an acre of ground in corn, it necessarily follows that, if, for want of proper manuring, we are obliged to plow, plant, and hoe two acres to raise fifty bushels of corn, which might be raised on one, we have thrown away thirteen days labor; as effectually mispent it, as if we had spent the thirteen days in transporting a brick from the back door to the pig pen, and then back to the door again.

How many farmers are there who prefer loaning money at interest, rather than apply it to the culture of their farms? Who plod on the "old way" of the boy who put a stone in one end of the bag, to balance the grist in the other? If we would make farming a good business, we must economise our labor.

JABEZ D. HILL.

Maine Farmer.

DWARFING FRUIT TREES.

The French have a method of cultivating dwarf fruit trees, or trees which have been stultified, by a certain process, which their writers describe as follows:—

"Young trees are to be treated in the following manner. If there are more than three shoots on the plant, reduce them to that number, and shorten each to three, four and six eyes, according to their strength. The following season, reduce the number of leading shoots to six, and shorten them to three-fourths of their length, and spur in the remaining shoots. The tree should be managed in every respect in this manner, until it has attained the required size, which of course depends upon the fancy or convenience of the owner, or conductor of the garden. I make a point of letting the trees take their natural form of growth, as far as the system described will admit; for I consider it of little consequence what shape is given to the tree, provided my end is attained; that is, to make every branch, as it were, a long spur, with bearing buds from the extremity to the base."

It is asserted by both French and English writers, that trees so stultified are not so much exposed to injury from high winds, that they produce better fruit, bear earlier and more abundantly, and occupy less space. Dwarfs are also produced by inoculating on stocks of small growth. The apple is often inoculated on the Paradise or *Doucin* stock, the peach on a slow growing plum, and the pear on the quince. We have seen large pears on trees not more than five feet high, the tops of which were not possessed of sufficient strength to sustain their weight of fruit without the assistance of props. This is a common result where some varieties of the pear are set in quince stocks. The writer above quoted says:—

"Two or three years' trial of this method only, might possibly deter many from a continuance of it, in consequence of the young wood which will

be produced yearly at first and from the apparent difficulty of getting rid of the superfluity. But that inconvenience will be utterly surmounted if the foregoing instructions are attended to, and the continuance will be the possession of both healthy and fruitful trees."

For the New England Farmer.

HARDY FRUITS FOR THE NORTH.

MR. BROWN:—As fruit raising is becoming a favorite pursuit, the question arises, what kind of trees shall we select to set, what varieties best for market, which the most hardy, and best bearers; what kind of soil and location best suited to the different varieties of trees, &c. These are all very important questions to be investigated, before setting an orchard. But as the different varieties of fruits vary in different climates, locations, and soils, we cannot adopt any general rule. For instance, the Esopus Spitzenburg apple, so beautiful when grown in its native soil on the Hudson River valley, becomes poor and insipid here. The Baldwin, so delicious in New England, becomes an ordinary fruit in many of the western States: this seems to be the case with many choice varieties, more especially of pears than most any other fruits. Every well-established fruit-grower is aware that certain fruits succeed in one place and fail in others; and that the same sorts are more likely to succeed in contiguous districts, than in such as are widely separated. But as a general rule, the known native fruits of any country, are best adapted to that country; and why? because out of many thousands of seedlings, they have been selected as the best fitted to that soil, or peculiar region; experience shows them the best adapted to it; but there might have been many others among those thrown aside, better adapted to other parts of the world. This opinion is proved by the fact that some foreign fruits are actually better here than in their native locality. Still there are some kinds well adapted to almost all climates and soils, and those are generally our hardiest varieties.

From our experience of locations and soils, we believe high lands or swells, are generally preferred to valleys, and a good loam soil,—as hills are less liable to early and late frosts. I have had some experience in fruit and trees, and having observed them carefully for many years, I will name a few varieties that prove hardy and good in the climate of this region.

Summer Apples—Red Astracan, Sops of Wine, Williams's Favorite, Early Joe, Sweet Bough, Golden Sweet, and Bemis Sweet.

Autumn—Fall Pippin, Gravenstein, Jewett's Fine Red, Porter, Maiden's Blush, Jersey Sweet, and Pound Sweet.

Winter—Baldwin, Blue Pearmain, Hubbardston Nonsuch, Red Canada, R. I. Greening, Seek-no-further, Northern Spy, Peck's Pleasant, Tolman's Sweet, and Ladies' Sweet.

Summer Pears—Bartlett, Doyenne d'Ette, Madeline, Osband's Summer and Tyson.

Autumn—Buffum, White Doyenne, (St. Michael) Flemish Beauty, Fulton, Heathcote, Louise Bonne d'Jersey, Napoleon, Stevens's Genesee, Swan's Orange, Beurre d'Amulis, Duchess d'Angouleme, Oswego Beurre, Seckel and Stearling.

Winter—Beurre d'Arenberg, Vicar of Winkfield, Lewis and Winter Nellis.

All the above mentioned fruits have been well tested, in this high northern latitude, and can be recommended for general cultivation with safety.

I have one thousand or more standard fruit trees at the present time, with two hundred or more varieties. But many of them have not borne yet so as to be fully tested in this climate. But we hope to make a report by and bye, that will enlarge our list, and gladden the hearts of northern cultivators.

L. BURR.

Watpole, N. H., Jan. 3, 1853.

REMARKS.—The adaptation of particular fruits to particular localities, deserves more attention. The Rhode Island Greening produces an abundance of fine fruit in some places, while in others the fruit grows large, but is cast early, and is very wormy. So it is with other varieties. The Baldwin does not flourish equally well in all parts of New England. So that the inquiries of our correspondent deserve attention.

THE DOLLAR MARK.

In the *Merchant's Magazine* were published several statements as to the origin of the dollar (\$) mark. A correspondent of the New Orleans *Commercial Times* publishes the following from a correspondent, and expresses the opinion that it is the most likely to solve the difficulty. Here it is:—

"I have observed in the several prints, lately, some amusing attempts to make a mystery out of a very simple matter—I mean the dollar mark, or prefix. One paragraph derives it from an abbreviation of a representation of the pillars of Hercules, which are supposed to be represented upon the Spanish dollar. Another makes it an abbreviation of the U. S. The true derivation of it is the figure 8. The Spaniards from whom we derive the dollar, counts by reals—as the French do by francs. A real is in value twelve and a half cents, or one-eighth part of a dollar. Any one who has read Gil Blas or Don Quixotte will recollect the phrase "piece of eight" which is frequently used by the authors of those works. This term, then, means nothing more than a dollar, or 8 reals. When, therefore, the dollar became generally used, the figure 8 was prefixed to express dollars, and in the process of time the 8 has been changed to the present mark. It has been asserted, but I know not whether correctly or not, that Gen. Hamilton first used this mark, soon after the adoption of our currency of dollars and cents. However this may be, the figure 8 is, no doubt the original of the mark, and the derivation I have given above, the correct one."

VANDALISM.

I have learned with astonishment that the town authorities of the town of Hingham have caused to be cut down a row of venerable and beautiful elms and ashes which stood in front of the mansion house of the late Gen. Benjamin Lincoln, and which is still in the occupation of his descendants, and, what makes this act of vandalism still more extraordinary, is the fact that these trees, or most of them, were planted by General Lincoln's own hands, and thus have an historical interest, in addition to their beauty and grateful shade and

that the blows of the axe which felled them were like blows upon the hearts of the grand-children of that distinguished soldier and patriot. The excuse or pretence for this, was an alleged necessity of widening or straightening the road! What can be the meaning of all this! The people of Hingham are rather remarkable for cultivation and intelligence, and in behalf of all who remember those fine trees with pleasure, I would ask why they have allowed the government of their town to pass into the hands of men who have so little sense of beauty and so little reverence for the past! For my part, were I resident of that pleasant town, I would rather see the road as crooked as a ram's-horn, than to have had one venerable limb shorn off from those green patriarchs. In my judgment, the causeless destruction of a fine tree is a sort of murder.

Arboricide is a crime, as well as homicide. The name of Gastrell, who cut down Shakespeare's mulberry tree, is justly followed by the execrations of posterity, and hangs forever on a gibbet of reproach, vainly craving the boon of oblivion. It is good to suspend judgment, till both sides have been heard, and now I call upon the men who cut down Gen. Lincoln's elm to say why sentence should not be passed upon them.—*Transcript.*

LEGISLATIVE AGRICULTURAL MEETINGS.

THIRD MEETING—TUESDAY EVENING, FEB. 1, 1853.

The third meeting of the series was held in Representatives' Hall, at the State House, on Tuesday evening, Feb. 1st. The meeting was called to order at quarter past 7 o'clock by Hon. J. W. PROCTOR, of Danvers, and His Honor, Lieut. Governor HUNTINGTON was invited to preside for the evening.

Upon taking the chair, Mr. Huntington returned his thanks for the honor which he conceived had been done him, and briefly expressed his high appreciation of the importance of agriculture, which might truly be said to be the greatest interest in the Commonwealth or even in the country. He then announced the meeting as open for business.

Mr. PROCTOR submitted the report of the Executive Committee appointed at the last meeting, embracing rules and regulations, and subjects for discussion, as follows:—

The committee, who were instructed to prepare regulations for these meetings, &c., have attended to the duty assigned them, and report—

RULES AND REGULATIONS.

1. The Executive Committee shall propose subjects for discussion, and give notice of the same, one week previous to the meeting. They shall nominate at each meeting a chairman to preside.

2. No speaker will be allowed to occupy more than fifteen minutes' time, unless by special permission of the meeting.

3. Meetings shall be opened at 1-4 past 7, and closed at 9 o'clock; unless otherwise specially ordered.

4. The chairman will be expected to state the subject for discussion; with such remarks thereon, as he may deem pertinent.

5. All members of the government, and others interested in agriculture, especially operative farmers, are invited to be present, and participate in the discussions.

6. Editors of agricultural and other papers are invited to take notes of what is said and done, and publish the same in their respective journals.

7. The number of meetings for the season shall not exceed twelve.

SUBJECTS FOR DISCUSSION.

1. The relative importance of the agricultural interest, in sustaining the well being of the State; as compared with any and all other interests.

2. The best mode of breaking up and pulverizing soils; and the depth of this process best adapted to ordinary cultivation.

3. The comparative value and profit, in the cultivation of grass, grain and vegetables, as farm products.

4. The cultivation and preservation of fruits.

5. Preparation and application of manures.

6. Subdivision and fencing of the lands of a farm.

7. Structure and position of farm buildings.

8. The breeds of neat stock best suited to the farms of Massachusetts; including the manner of feeding and improving the same.

9. The expediency of autumnal plowing of land intended for culture the ensuing season.

On motion of Hon. SETH SPRAGUE, of Duxbury, the report was adopted.

Mr. PROCTOR was then called upon to express his views upon the subject for the evening's discussion, viz., "The relative importance of the agricultural interest, in sustaining the well-being of the State, as compared with any and all other interests."

Mr. Proctor remarked that we hear a great deal said about the interests of the farmer, but do we find those interests sustained in proportion to what is said respecting them? More than one-half of the laboring community are engaged in cultivating the soil, but does the State protect farmers in anything like the same ratio that other classes of the community are fostered and sustained? Does the compensation received by the farmer for his labor, compare with that which accrues to other employments? In looking over the accounts of farming operations, he had found that even the best of farmers get a very limited income from their farms. In looking over the records of the returns from Worcester the present year, he found that the income of the farm which received the highest premium was only \$242 above the expenses. In Essex, the committee state that very few farmers realize more than \$200 or \$300 over and above the expenses of their farms. He thought this disproportionate to the labor and respectability of the profession, and the question is, can the State do anything to advance the interests of agriculture? Propositions have been made for the education of the farmer, but how shall it be brought about?

Mr. SPRAGUE, of Duxbury, was not aware of any-

thing that could be done by government for the benefit of the farmer, except in the regulation of the general policy of the country. We are a producing people, and the difficulty is not with us the want of protection to enable us to compete with other nations. We produce more agricultural productions, than we can consume; hence we want a market, and if we cannot find it abroad, we must seek it at home. So far as New England is concerned, it costs us more to raise a bushel of corn or grain than any where else in the world, and it is more a matter of astonishment that we succeed in farming at all, than that we get but a small reward for it. The most important thing that can be done for the farmer in New England is to provide him a market, and the next to improve his mode of cultivating the soil. We must extend the science of our profession. We have as yet paid but little attention to the philosophy of farming,—to the breeding of cattle, and the stock with which our farms should be supplied. We must overcome the difficulties under which we labor in competing with the productions of the valley of the Mississippi, by our superior skill, and by having a ready market near at hand. The want of a market is supplied by the manufacturing interest that exists in New England, and the speaker contended that the interests of agriculture and manufacture were identical. He was unable to decide which was the most important, for if you destroy one you emphatically destroy both. Take away the manufacturing and mechanical interests of Massachusetts, and you take away all the market which the farmer has for his products.

In allusion to the remarks of Mr. Proctor in regard to the profits of farming, the speaker said that he was acquainted with a good many farmers in the vicinity of his residence, and he did not know of a single individual that got his living exclusively by farming. He knows some very good farmers, with farms that a few years ago would have been considered worth \$8000 or \$10,000, who did not make any profit on their estates; he was certain they did not accumulate. He was strongly of opinion that the farmers of the Commonwealth got nothing for their capital. Some farmers, he was aware did make money—those who produced milk, and those that raise a great deal of fruit, and hay, for which they have a ready market—but these are exceptions.

Col. W. E. FAULKNER, of Acton, said that in his town there were farmers who had made money within the last twenty years. But they were men of iron constitutions, who got along with but little hired help. They went 25 miles to market before the railroad went through the town, and made \$600 per year, chiefly on hay. He believed that a time was coming when farming would be more profitable than now, because in the South and West the soils are becoming exhausted from improper man-

agement, and people were moving back; and the time is at hand when we shall have a home consumption, which is considered by all practical men as better than a foreign market. The speaker alluded to the necessity of agricultural schools, to give our children a knowledge of chemistry, so that they might know how to treat soils, and keep them fertile and productive. He believed that by skill and industry, the farmers of New England would be able successfully to compete with the farmers of the other sections of the country. He stated that most of the flour which is ground in New York was raised in Michigan, and the country west of New York, whose lands are fast running out. He thought that farmers were not so well paid as mechanics. Farmers' sons cannot be induced to farm it for a living, because they can get more at other callings.

Mr. MERRIAM, of Tewksbury, dwelt at some length on the relative importance of the agricultural interest of the country, and complained that nothing had been done by government to foster it.

Dr. COGSWELL, of Bedford, humorously related the reasons which induced him to give up practicing physic, to follow farming, the primary cause being an old picture representing a king, a clergyman, a lawyer, a physician, and a farmer. The king was represented with this motto, "I govern all;" the clergyman with the legend, "I pray for all;" the lawyer, "I plead for all;" the physician, "I prescribe for all." The farmer was represented as drawing out rather reluctantly his purse, with this inscription, "*I pay for all.*" It was this incident which gave him his first impressions of the true dignity of manual labor, and he had enjoyed more true pleasure during his eight years of farming life, than during the twenty he had spent in making pills. He believed the only useful classes were the farmer, the mechanic, and the trader. All others, lawyers, doctors, ministers, &c., he believed could be dispensed with altogether, and the world wag on just as well without them. He firmly believed from his own experience, that farming was profitable.

Mr. HASTINGS, of Framingham, a mechanic, contrasted the position and remuneration of the farmer with the mechanic, placing the farmer in much the most favorable light. The farmer spent less time about his business than the mechanic, had more leisure, less trouble in collecting his dues, more privileges &c. He could point to twenty farmers who had got something to show for their labor, where he could to one mechanic in the same circumstances. The farmers have the balance of power, and they can fix things their own way if they choose.

Mr. TRULL, of Tewksbury, said he had got his living by farming, and he disliked to hear his brother farmers depreciating their occupation. As far as the profits of farming were concerned, he had

never seen the want of money. He had watched manufacturers and mechanics, and he considered his chance for a living as good as theirs, with the same degree of labor. A great many farmers mistake their calling. They must not expect to get rich in one, or five, or ten years. The farmer should go perseveringly into the labor himself, take his coat off, rise early, and work late, and see that his business is continually going ahead, and if he works systematically and energetically, he will meet with a fair measure of success.

Mr. CLARK, of Northboro', said he had had some experience in farming, and thought the idea that farmers do not make so much money as other people, perfectly fallacious. A few years ago he had a farm of 150 acres which he could not take care of, and so let it for \$200 per year, withholding the wood. At the end of the year the tenant said he could not get along, at that rent, and proposed a partnership, to which the speaker assented. He commenced a new system, took in stock, and instead of hiring, let out work by the job; and in the spring, after selling out stock, got \$400 rent instead of \$200. In thinking of the wages of the mechanic, the farmer does not consider that he has got his house-rent, his firewood; and most of his provisions from his own estate. He would like to know how much a farmer would lay up at nine shillings per day, without a farm? The farmer, too, keeps a horse, and enjoys the pleasure of riding to mill and where he pleases, without extra cost. While the mechanic has to pay for this chance, and lose his time beside.

The speaker related the result of an experiment he made with a piece of land. It was covered with high bushes, which he had mown off, then got a kind of harrow made and got the roots out and burnt them, and then put on some manure and sowed it down with rye. From this land he obtained 45 bushels of rye to the acre. That land he said, netted him 160 per cent.,—land that was not worth originally \$5 per acre, and had not cost \$40, but was now worth \$200 per acre.

The speaker contended that, where farmers could not superintend their work, they should let it out by the job, instead of hiring. They could make more money by it. He believed the farmer could secure just as much profit for the same amount of labor, capital and skill, as any other profession.

Mr. BUCKMINSTER took occasion to exhibit a cake of solidified milk, or milk and sugar, which was brought from New York, a convenient article to carry to sea.

Dr. COGSWELL, alluding to the charge that government had not legislated for the benefit of agriculture, said that God had taken the legislation into his own hands. For the last few years, he has visited the farmer with the potato disease, which is a blessing in disguise, and a punishment to that

community which has refused to legislate for the farmer. It has brought that staple article up from 20 to 50 cents per bushel, and he thought it would not again fall below that point. So also of the scarcity of hay, the past season, which has increased greatly in price. He believed it would continue high for years to come.

Mr. SMALL, of Truro, knew that farming was unprofitable as far as dollars and cents were concerned. One great cause is, that those who have capital and skill, will go into some other business, for a man who can make a hundred dollars a month catching fish, will not take to farming. Farmers as a general thing are ignorant of their calling; they want more light, more intelligence to understand the soils they cultivate. We have no real system of farming, and most work is done by guess. One great fault, he thought, was, feeding soils with too much manure, especially that which is stimulating. He thought the cause of the potato rot was brought about by over-feeding with manure. It is just so with our animals—too much food injures them. Therefore we want to know just how much, and what kind of manure, our soils need. He thought that if farmers in general understood these things, there would be no difficulty in getting a comfortable support from the earth.

Mr. PROCTOR explained that in making the statements he did in the early part of the evening, in regard to the unprofitableness of farming, he did so with a view of calling forth statements of an opposite character. He had no doubt that in his county there were farms which yielded \$1500, or \$2,000, per year. Mr. Ephraim Brown, who owns a farm in Marblehead, had informed him that he had sold the produce of his farm in market for \$5,000 in one year, and one-half of that was clear profit. Half an acre of onions yielded 600 bushels, which sold on an average for 40 cents. Still Mr. Proctor believed there were many more farmers who come short of \$300, per year, than of those who go beyond it.

The hour of 9 having arrived, the meeting adjourned.

The subject next Tuesday evening, will be—
"The best mode of breaking up and pulverizing soils, and the depth of this process best adapted to ordinary cultivation."

CORRECTION.—In our report of the last meeting, Mr. HOWARD was represented as saying that "in New York it is assumed that ten pounds of milk will make one pound of cheese or one pound of butter." It should have read, "ten *quarts* of milk will make one pound of butter or *three* pounds of cheese." In the report of the same gentleman's remarks, instead of "one Devon brought over to Connecticut," read "one *importation of Devons*."

✠ The only thing which every one can do, and the only thing which any one need do, is his duty.

For the New England Farmer.

TO INVENTORS.

MR. EDITOR:—A machine is wanted by many farmers, by means of which, horse power may be applied to loading manure, muck, &c., from heaps into carts.

It should be simple, light, cheap, strong, and capable of loading a cart in from one to three minutes. Any person who can invent such a machine will be amply repaid in money, and in the gratification of being able to facilitate this laborious operation.

A shovel, moved by steam power, loads with gravel a car at a time. Cannot this machinery be so modified as to be used for the above-mentioned purpose, substituting grappling tines for the shovel? One "reaper" collects, and deposits the grain in heaps ready for binding. Cannot this machinery receive the requisite modification?

Jan. 18, 1853.

L. R.

REMARKS.—Well, we don't know. If on very large farms the manure all fell into one enormous heap of some thousands of loads, such an implement might be found useful. However, your inquiries can do no harm, and we cheerfully give them currency.

For the New England Farmer.

ANALYSES OF SOILS.

GENTLEMEN:—From no branch of scientific agriculture, perhaps, is more expected than from that which teaches the analysis of soils. If the farmer by subjecting a few handfuls of earth from his various fields, could ascertain exactly what was necessary to promote its fertility, he might proceed intelligibly—would know exactly what to do. He might then laugh at the plodding experience of his fathers, and, following the sure teaching of positive knowledge, be certain of the most happy results. But is it safe to encourage such expectations? Do men who are learned in these matters profess to be able by an analysis of the soil, to answer the questions which an intelligent farm-hand might propose?

For one, Mr. Editor, I have little confidence in the analyses of soils in the present state of the science. My skepticism on this point I ascribe to my agricultural reading, and to the cautions and confessions of chemists themselves; as well as to the unsettled and contradictory theories which have been based upon the results of attempts to analyze soils. The lamented Prof. Norton, in one of his letters to the *Albany Cultivator*, makes the following acknowledgment: "*The laboratory alone is pretty sure to go wrong when it attempts to prescribe rules for practice.*" Speaking of the change of Prof. Liebig, from the ammonia to the mineral theory, Mr. Norton uses the following language:

"The principal supporter, and indeed the originator of this theory, (the mineral manure theory,) is Prof. Liebig. This distinguished chemist, distinguished no less by his clear lucid style, than by his high scientific reputation, was for a time devoted to 'the ammonia theory,' excluding those mineral manures to which he now attaches so much importance. A few years since, however, he saw cause to change his ground, and has since held, that if we furnish mineral manures in abun-

dance, plants will, without doubt, always obtain their ammonia, or rather their nitrogen, from the atmosphere or the soil. In pursuance of this idea, he went so far as to compound, after careful study of ash analyses, specific mineral manures for wheat, rye, oats, turnips, &c., which were to take effect upon all soils in a proper physical condition. The failure of these specific manures, which were patented in England, was, as many of your readers doubtless are aware, very decisive."

The chemist to the Ohio Board of Agriculture, Mr. David A. Wells, devoted the summer of 1851 to "examining, analyzing and reporting upon the nature and composition of the soils of that State." He gives the following as the result of his analysis of some of the richest soil of the celebrated Scioto valley—soil that has been cultivated fifty years, and now, says he, "with the most ordinary culture, yields on an average, one year with another, eighty bushels of corn to the acre."

ANALYSIS OF SCIOTO VALLEY SOIL.

Whole amount of insoluble matter, silicious sand and clay.....	88.00 per cent.
Lime.....	0.40 "
Phosphoric acid.....	0.04 "
Alkalies.....	0.16 "
Organic matter.....	6.00 "

He compares this, with analyses of Massachusetts soils, as given in the Geological Report of the State, by President Hitchcock. The following is the result of the analysis of soil from Palmer, Hampden County, Mass.

Insoluble silicates.....	88.00
Phosphates.....	0.60
Lime.....	2.00
Organic matter.....	8.00

On this comparison of analyses, Mr. Wells remarks: "We find but little difference in the amount and value of the mineral constituents of the Ohio and Hampden county soils; if any thing, the advantage is on the side of Massachusetts soils."

Having witnessed the growth of corn in both States, I must here confess my surprise at these results; and will acknowledge they have done much to shake my faith in the value of all chemical analyses of soils. Is it possible, that by careful analyses of soils from sterile Massachusetts, and of those from the Scioto valley, famous for its wonderful fertility, no clue to the vast difference between the two can be detected?

The editor of the *Ohio Cultivator*, after admitting that, in common with other agricultural writers, he has urged the importance of analyses of soils, for some ten years past, now says:

"We confess, however, that we are disappointed in regard to the practical advantages that have resulted thus far from the analyses of soils in Ohio and elsewhere; and we do not at present see what benefit is likely to be soon realized from such analyses."

President Hitchcock, in a letter to a friend and pupil, who had been appointed State geologist, by the Executive of Vermont, writes as follows:

"I should not think it strange if some should be disappointed, as they have been in other States, by anticipating too much from the mere analyses of soils. The impression is very strong, through the community, that the chemist, by such an analysis, can determine what is wanting to render a soil fertile, or what renders it barren. Now even admitting that he could do this, an analysis

of the soil from almost every farm in the State, nay, from almost every field, would be necessary to make it of much value; and it is not generally known that every such analysis, accurate enough for this purpose, could not consume less than two or three weeks. *But I do not believe that agricultural chemistry is yet advanced enough to enable the chemist to say in many cases what ingredient added will be sure to render a barren soil prolific.*

I have written this article, Mr. Editor, not for the purpose of throwing doubt or suspicion upon the just claims of science; but simply to bring before your readers the question whether the popular mind is not demanding and hoping more from her than she has ever promised to do—more than she can perform; and consequently whether there is not danger of fostering expectations, the certain disappointment of which will strengthen prejudice against all scientific teachings. And I will close with a few reflections. The experience of the practical farmer may be undervalued, in the advocacy of scientific knowledge. The impotence and fallibility of what is called science, rather than the stupidity of farmers, a reason for the slow advance of "scientific agriculture." Instead of the *application* of science to agriculture, the *creation* or *perfection* of science for agriculture, is needed. "The first thing to be done is, [not] to prepare the mind [of farmers] for a better system," but to prepare the "better system." "The preparation of competent teachers . . . will necessarily precede the instruction of pupils." S. F.

Winchester, Jan., 1853.

AGRICULTURAL IMPLEMENTS.

The use of horse-power, for the purposes of cutting and harvesting grain, for plowing and other operations, may very probably, before many years, be superseded in a measure by steam power. The idea has been already suggested, and some attempts have been made to carry it into practical operation. It would seem that steam power could only be applied successfully to plowing, by running the plow on wheels, as is done in some parts of Europe, and in the prairie plow in the West; and then that it could not be used to advantage except on level, or nearly level lands, free from stumps and large stones. Some experiments were recently made in England with the plow, subsoil plow and harrow, operated by steam power, all of which are represented as fully answering all reasonable expectations. The plowing took place on old lands, having some dips. In one experiment, four acres were plowed in ten hours, and might have been subsoiled at the same time, making the amount plowed nearly an acre an hour. The relative expense of plowing twenty-four acres, is found by that trial to be, by horse power, \$44 23, and by steam power, \$30 75, making a difference in favor of the steam power in plowing the twenty-four acres, of \$13 48. We can hardly realize that it will ever be of practical use in New England.

After the most judicious selection of a plow, the work will be quite likely to be badly executed,

unless the principles of draft are understood. "So great is the difference between an awkward and skilful adjustment of the draft to the plow, that some workmen with a poor instrument have succeeded better than others have with the best; and plows of second quality, sometimes for this reason, have been preferred to those of the most perfect construction."

Perhaps the object of the Massachusetts State Agricultural Society, in instituting the plowing matches at Brighton, was principally an improvement in the breed of working oxen. Yet so slow were the competitors in those honorable and useful contests, to allow of any deficiency in their animals, and to lay upon them the stigma of defeat, that they were led to most searching examination into the structure of their plows, to which they were not willing to charge it. The result, therefore, has been successive improvements in the plow. A general impetus has been thence communicated to the whole art of agriculture. Improvements and inventions have abounded. New implements have been invented, old ones improved, and thus a better tillage has been produced, and greater facilities in harvesting have enabled the farmer the better to save his crops.

Another indispensable implement upon the farm, and one of great practical utility, is the harrow. This instrument naturally follows the plow in farm operations, and although scarcely less important, in the service which it renders, than the plow itself, has not seemed to obtain that attention which it deserves. Indeed, while constructed in the manner in which are most of them now used, they will gain few golden opinions from intelligent men. Their great objection lies in their weight. They are too heavy and are moved too slowly. In order to pulverize the soil thoroughly and leave it in fine and delicate tilth, it is necessary to use a light harrow, with sharp teeth, and to move it quickly over the ground. "If we examine a field one half of which has been harrowed by weak, inefficient horses, and whose pace was consequently sluggish, the other half by an adequate strength and swiftness of animal power, we shall find the former will be rough and unfinished; the latter comparatively fine and level, and completed in what would be called a *husbandry-like* manner." On meadow sward, that is filled with roots of small bushes and coarse grass, a light harrow with sharp teeth, moved rapidly over the surface, cuts the roots apart and brings up the fine, light soil, admirably prepared to receive grass seed; while a heavy instrument, slowly moved, would turn up innumerable sods, and do little towards pulverizing the surface. "Many would be surprised, who have never made the experiment, at the amount of reduction of which seed harrows, at least, are capable; and where land is clear, to see how effective very light small toothed harrows, may be

made." In an experiment made between a pair of wooden harrows, and a pair of iron ones, constructed alike, although the iron ones were twenty pounds the lightest, yet they worked decidedly better and steadier than those made of wood. It seems to be requisite to have the desired weight in the most compact form; the instrument performs its work easier and better, while it is more conveniently handled by the operator.

The horse rake, in its various forms, has proved itself of great service. One patented by a Mr. Delano, of Maine, has been considerably used in this State, and is scarcely excelled by any labor-saving machine in use on the farm. Its teeth act independently, thus adapting itself to all surfaces, and the operator rides as he rakes. The process of raking is rapid, thus enabling the haymaker to leave his spread grass to the benefit of the sun, until a late hour in the afternoon, and frequently to get it in on the same day in which it is cut. It is cheap, simple in construction, and durable.

A horse-mowing machine, and a machine for spreading swaths, are implements much wanted, and are inviting subjects for the inventive genius of some of our citizens.

For the New England Farmer.

EXPERIMENTAL FARMING.

BY SILAS BROWN.

MESSES. EDITORS:—This will compare with experimental religion; no religion is genuine but experimental religion; and so it is with farming. Our greatest theorists in both, sometimes run into the regions of moonshine and are deceived by trusting to reflected light.

The chemist may analyze the soil on my farm and discover the deficiencies which are required to constitute a good soil, and point out the ingredient or ingredients which are wanting, theoretically, and I go to work practically, and find my land unproductive as before; or he may analyze the soil in one situation, and find it totally deficient of an element which abounds plentifully at a little distance from the soil analyzed. Many of our farmers have soils varying every few rods, and what would prove a suitable ingredient in the manure for one place would be worthless applied to another.

We dug a well a few years ago for the accommodation of my barn animals; after removing the soil at the surface, we entered a quicksand which continued to the bottom of the well, and proved so troublesome by flowing into it and filling it up, that I had a new one dug about 50 feet distant from the other; there, after removing the soil, we came upon hard, compact clay gravel, which continued to the bottom, and was pecked up at a greatly increased expense over digging the first well; here was an illustration of the change of soils worth noticing. In this neighborhood the changes from clay to sand may frequently be seen; bricks have been made within a few rods of a sandy soil without the least appearance of clay.

Thus analyzing soil in any one location will not

truly represent the different locations on a farm, or point out the different ingredients required to enrich them, and after all, the only thing to be relied on is the practical application of different kinds of substances to the soil, and decide experimentally which is best. All farmers know that clay with sand, or mud with sand, will improve the soil, but it is very difficult for farmers to go into critical analyses of soils, even by the help of a chemist, but with doubtful success.

It appears to me to be a difficulty approaching an impossibility, that the best practical chemist can give directions to the farmer how to prepare his manure to suit his different kinds of soils, and fit them to produce different kinds of crops, with any precision. The farmer, after all, has got to learn by a fair trial and accurate observation, how to enrich his land and fit it for any particular crop. As a general rule, in the application of manure, perhaps it would be the best way to follow the example of the poor traveller, who got destitute of money and was obliged to exercise his wits to pursue his journey, and understanding the gullibility of "poor human nature," he concluded to make an attack upon it in its most vulnerable part, and pronounced himself a doctor; he soon found a patient and promised a cure; (a matter of course with certain benevolent people who have a single eye to the benefit of others, and a double one at the contents of their money purses;) the next thing was which way to go to work to do it. At length he hit upon a plan like one who suddenly awakes from a reverie, and with true Yankee shrewdness, he went out into the fields and gathered every kind of herb that came in his way and said it was very strange if some one among them would not be a suitable remedy for the disease of his patient.

I believe, with the limited state of our knowledge, that in the preparation and application of manures, the better way would be to make a compound of every substance, vegetable and mineral, which would have a tendency to benefit any kind of soil, and like the doctor's prescription, it would be very strange if some of the ingredients should not prove of the right kind.

Wilmington, January, 1853.

REMARKS.—This is the common practice, friend B., and one to which we are obliged to resort for want of an exact knowledge of what each particular crop needs. We have no doubt a great deal of medicine is administered in the same way. A mixture is given, that something in it may hit, where a simple article would have been better, had the disease been thoroughly understood. In manuring from a compost heap made up of all sorts of materials usually collected on the farm, do we not apply from it certain substances already abounding in the soil, and which the crop does not need? It seems to us, therefore, that analyses, although only approximating the truth, are better than an indiscriminate use of manures.

A COMPOUND SOLAR MICROSCOPE has recently been commenced in the city of New York, by Professor J. Hinds, formerly of Salem, N. Y., capable of magnifying objects 17,450,000 times.

For the New England Farmer.

HISTORY OF THE BORER.

MR. BROWN:—The insect which propagates this destructive worm usually lays its eggs in the month of June or July, and they are hatched in the following month of August or September; immediately the maggots penetrate the bark, eating the pulpy part next the wood. The latter part of Sept. they are not more than 1-16 of an inch in length, and are easily removed, being usually found within an inch of the top of the ground. It requires keen eyes to discover them, but it may be done in young trees by observing a little roughness where the maggot enters, and a slight discoloration of the bark at that particular spot. By the last of November, slight cuttings may be seen through some very small punctures in the bark. At this season, the worm will be found about 3-16 of an inch in length, and to have eaten in the soft bark and pulpy sap-wood, a space as large in area, as a middling sized bean. Up to this time they have done very little damage, and are easily removed with a sharp pointed knife.

Early the next spring they commence their course downward, working in the last year's sap-wood, directly under the bark. This year, their depredations are most destructive, working mainly below the surface of the ground. I have known four worms half girdle a tree four inches in diameter, eating most of the sap-wood on one side, and running their path together in various directions from the top of the ground to the junction of the roots. In the November of the 2d year they are about 3-4 of an inch in length, and may almost always be found below the point where they first entered the bark, and rarely ever beneath the wood, but in the sap-wood beneath the bark, which is usually discolored, but not broken. The next spring they turn upwards, following up some channel which they have previously made, until they are about as high as the point where they first entered; they then eat inward, in a direction not usually straight, mainly upward, and rarely ever more than an inch into the solid wood of the tree. Here they remain the *third* winter of their life, and are about an inch or an inch and quarter in length. The next spring they turn their course out towards the bark, and when nearly through the wood, about the 1st of June, they are transformed to a perfect winged insect, which soon eats directly out through the remaining wood and bark, leaving a round hole about 1-4 of an inch in diameter, and usually from six to ten inches above the place of entrance.

I have on the 5th of June taken from a section of tree which it had spoiled, a perfectly formed insect, with about the same thickness of wood as of bark to cut through to effect its liberation. Thus they generally occupy nearly three years in the circle of life; I say generally, as I have some evidence that they are not entirely uniform, a few making the circle in two years.

I have been induced to write this sketch of the borer, as most accounts of the insect which I have seen, describe its course upward, and *only* upward, whereas, its most destructive operations are lateral and downward, during its second year, and least liable to observation, as cuttings are rarely seen, its operations being at and beneath the surface.

Of the means of prevention, or destruction, I

have tried the following: A mound of ashes round the tree only drove the insect to deposit the eggs just above them. A wash of spirits of turpentine, or strong ley, is not sure, although it will kill the eggs, yet some of them may be hatched, and when once within the bark any wash leaves them unharmed.

A newspaper or wrapping paper wound around the tree and fastened there, is a perfect security. I have tried it for twelve years and never have had a tree infested that was thus secured—and it is only through my neglect, since I first tried it, that I have been troubled. When they are in or under the bark, a sharp-pointed knife is the only sure instrument—remove them the first autumn or next early spring, if possible. This can be done only by close observation. After they have struck into the wood and are working upward, I destroy them by introducing a sharp wire, or a very small sponge fastened to the end of a small wire dipped in spirits of turpentine, which, if it touches them, is certain death, and I believe it is if the hole is wet with it. In looking for borers in the month of October, which is perhaps the best month, I advise, that when one is found, be careful to look for more in the same tree. I have usually, when I neglected to paper my young trees, found borers in perhaps one in six, and from those taken out, from four to twelve, showing that a quantity of eggs is usually deposited on one tree.

Yours, RICHARD C. STONE.

Sherburne, June 10, 1852.

RESULTS OF ACCIDENTS.

Some of the most useful inventions owe their existence entirely to accident; such, for instance, as the accidental discovery that Plaster of Paris was a non-conductor of heat—a peculiarity to which our "fire-proof safes" are entirely indebted for their usefulness and popularity. The discovery was first made in this city in 1830, by a mechanic, who carried on various branches of smith-work in Eldridge Street. Having occasion to heat some water, he took a cast-iron vessel in which plaster of Paris had been used, and to which some had adhered, forming a crust or coating on the inside of the kettle from one-half to three-fourths of an inch in thickness; he poured in water and put it over a fire, with a view of heating the water sufficiently for his purpose; to his great surprise, after remaining in some time, he found that no change had been made in the temperature of the water; he blew the bellows, rendered the fire still hotter, and was still more surprised, after a long lapse of time, that the water did not become warm; he left the water on the fire, and went on with his work. Returning after some hours, he found the water had only become a little tepid; on this he laid various combustible substances on the fire, but still no effect was produced. Being somewhat puzzled to account for so strange a state of things, he next day instituted a series of inquiries, the result of which was the invention of the celebrated "Salamander Safe," for the privilege of manufacturing which, Mr. Wilder, of this city, pays the discoverer, S. C. Herring, \$25,000 a year. So much for having an accident in the family, and properly taking advantage of it.—*N. Y. Dutchman.*

SILESIAN MERINO EWES.

The above engraving represents a group of Silesian Merino Ewes, owned by Mr. GEORGE CAMPBELL, of Westminster, Vt. He purchased them in Prussian Silesia, in the spring of 1851. In a letter in the October number of the *Wool Grower*, Mr. C. says, "these sheep are descendants from the famous Infantado's flock, so much admired in Spain, some fifty years ago, and as far as my knowledge extends, they are now the only flock of this variety that have been preserved in their pure state, to the present time."

"The proprietor of this flock imported the original stock from Spain, in 1811, and since that time, has given his own personal attention to his sheep, and by this means has been able to still further improve them, especially as regards the quality of wool, which has been increased in fineness without diminishing the weight of fleece. It is believed that very few, if any, sheep in the country at the present day, will produce more pounds of wool, according to cost of keeping, than the Silesian Merino. For the shape of the sheep, I will refer you to the engraving, as it is a faithful copy of a daguerrotype; and to convince you of their hardiness and strong constitution, I need only to refer you to the circumstance, that one ewe of this flock lived to be 21 years old. The skin of this sheep was carefully stuffed and placed in the sheep-fold, where it now stands with quite a life-like appearance. I mention this fact merely to show that the gentleman takes an interest in his flock."

"My Silesian Ewes suckled lambs during the winter, which every one knows will lessen the fleece at least one pound per head. They were thoroughly washed and sheared as soon as properly dry, shearing an average of 4 lbs. 5 1-2 oz. per head. Bucks of this variety, when fully grown, will shear from 6 to 10 lbs. of well washed wool."

A GOOD EXAMPLE.

It was recently stated that James M. Whiton, Esq., had given \$20 to the New Hampshire State Agricultural Society, but the purposes for which the donation was made were not stated. In the report of the Committee of Needlework, at the late fair at Meredith Bridge, the suggestion was made that "large quantities of embroidery and expensive work were offered for premiums, and but little needlework which was of practical utility." Acting upon this suggestion, Mr. Whiton sent the \$20 to the officers of the society, with the request that it might be offered in premiums for the best specimens of *patching and darning*. This is truly practical, and the New Hampshire girls will now have an opportunity of showing their skill in a description of needlework of far more importance and interest to the hard-fisted yeomanry of their native State, than fancy quilts, embroidered ottomans, tapestry, &c. We imagine that those excelling in this new department will be in great demand to grace the homes of the young farmers of New Hampshire. We are glad to notice this provision for the award of premiums for excellence in those acquirements which will fit the daughters of our farmers for the practical duties of life. Many who can tastily embroider an ottoman, it is to be feared, would be completely at a loss to know how to neat-

ly darn the heel of their father's stockings, or sew a patch upon his homespun pantaloons. The example of Mr. Whiton, in offering a premium for *patching* and *darning* is worthy of imitation by all our agricultural societies.—*Boston Journal*.

For the New England Farmer.

GOOD MANAGEMENT VS. BAD MANAGEMENT.

The last garment was mended, neatly folded, and placed in the drawer on Saturday afternoon, when Mrs. Lee took her knitting, for there were a few spare moments just now.

Mr. Lee enters, and is speaking of his new neighbor, Mr. Prentice.

"Ah! Stranger things have happened, Ellen. Why, don't you remember how, through bad management, Major Simes lost his farm and all his property. Prentice has bought another plow, a subsoil, they call it, that's the third he has bought since he came here. I rather think he will 'improve himself out of doors' one of these days, as old Col. Durgin used to say, when people talked to him about improvements on a farm. Why, Ellen, Prentice spends more for tools in a year, than you and I do for clothes in twice that time!"

"But, as I said before, I really think he is a fine man and means well; but you see he has begun at the 'big end of the horn,' and if he is not amazing careful, he will come out at the 'little end.' This being 'more nice than wise' on a farm, don't pay. That farm will have to be sold again, and if we should have it, why, as I said before, 't'would be no stranger than many things we have known.'"

"Well, Jerry, I don't know what we should do with it, for don't we have as much as we can do now?"

"Yes, but if it has to be sold, it's handy to us, and if we have good luck, I mean to show you a 'pocket full of rocks,' half-a-dozen years hence, without going to California, either. One must invest money somewhere, and I believe land is as safe as any thing."

Mr. and Mrs. Lee were, in "Yankee parlance," very "*clever folks*." At the death of his father, Jerry being an only son, inherited the homestead; and now, a dozen years from that time, we find him comfortably settled, with four bright-eyed boys, and little Ellen, the much-loved pet of the whole household.

Was Mr. Lee a stingy, crabbed man? By no means; was he cross to the children? Ah, no—a kinder father, you nor I don't often see.

And now, with this farm productive, easily-worked, and everything apparently favorable for success, what is to hinder Mr. Lee from having that "pocket full of rocks," to pay for that farm if it is sold? We mean the "Nelson farm," that Mr. Prentice bought last spring.

Mr. Prentice was not "brought up" on a farm, but in the city; and having acquired a snug little fortune, he chose to buy a small place where he could "sit under his own vine and fig tree;" and then he never found it easy to banish from his mind the few happy days of his boyhood, which were spent on his grandfather's farm. That dear old man—"peace to his ashes," how kindly he smiled as he patted the curly-headed boy, and said,—

"If Billy lives, he must have a farm, and not always live with brick and mortar, dust and heat."

But we have wandered from our story—and now the sound of merry voices upon the bridge tells us that school is out; and now the boys come rushing in, and with their voices raised to the highest pitch, one exclaims—

"Mother, there is going to be a great thunder shower, wont father's hay all get wet?"

"O, mother, why *didn't* father buy that 'horse rake!' Mr. Prentice has bought it and is raking now with it; his black horse goes complete in it—there, hark! don't you hear it, mother! don't it make a queer noise? Mother, what *was* the reason father didn't buy it? I wish he had—George Prentice said father engaged it a week ago, and the man brought it for him, but he concluded not to have it, this afternoon; so Mr. Prentice has taken it on trial. I think his old one might have done for him. See, they have finished, and it will be in before the rain comes."

"Wouldn't I like to see our Nelly harnessed in that rake, making such nice rolls of hay in our smooth field!"

"Here comes sis,—she is always behind us boys—she has so many last words for the girls, that one would think every Saturday was the last day of school."

"Yes, but I guess you don't know that father has sold Nell, and got a strange horse! Look quick, pa is leading him into the stable now."

"Nell, gone—gone—she was the kindest creature in the world! 'Tis too bad—I declare it is!"

"Children, you have said enough; why, you are talking so fast, I cannot 'get a word in edgewise.' Now, boys, out and see if you cannot help father rake up his hay, for the shower will soon be here."

And now as the three boys, rake in hand, are scampering for the hay field, let us sit down quietly with little Ellen, the pet of the household, and after mother, we mean Mrs. Lee, has closed the windows so that the rain may not come in, she will join us.

It was a hot day in August, the thermometer at ninety degrees; but as Mr. Lee remarked in the morning, "a capital hay day."

"Now, Ellen," said Mr. Lee to his wife, on the Monday previous, "I am going to, (by the way, 'I'm going to,' was a very frequent expression of Mr. Lee's, a sort of watchword, that begun and ended many excellent plans,) I am going to get additional help and finish our haying in short meter. If we have fine weather, I won't be behind-hand this season. And then I'm tired seeing you work so hard. I suppose Prentice will finish Saturday night; I will be up with him, and Ellen, I believe I shall buy a horse rake, although I do not think much of new-fangled notions about farming; yet I'll venture to buy this and see how it works; so if it holds fair by Saturday night, you may expect to see my hay in the barn."

"Well, it's just my luck, Ellen," exclaimed Mr. Lee, as after changing his wet garments and taking little Ellen upon his knee, he seated himself with the rest of the family in the front room.—"How it pours—it is all for the best, I know, but I can't help thinking, if Prentice had half a dozen tons of hay out just fit for the barn, it would not have rained so. Well, he has been a lucky dog about his hay, this season, if he don't manage so saving as some. Scarcely a load wet any—none to do any injury, and here I've had two-thirds of

mine wet, and I fear a good part of it spoiled; but I sha'n't fret, I never did and I sha'n't begin now."

"Father, what is that horse's name, you have got?" A sharp flash of lightning accompanied by a tremendous peal of thunder, prevented any reply; but little Ellen was not so easily satisfied without an answer. Upon the question being repeated, Mr. Lee whispered in the child's ear, while he gave a half anxious, inquiring glance at his wife,—

"I don't know, dear, but don't you say any more about it, now, Ellen dear; now mind pa."

"I will, pa; but you will tell me about it, and what you let Nell go for, as soon as it is done raining, wont you father?"

The truth is, Mr. Lee, like all sensible people, found it quite satisfactory to himself, to be able to give a good reason even to his children.

But now he would rather talk with Mrs. Lee alone than to be questioned by the children.

Ah, Jerry, you well know, or you may know if you will only look at matters candidly, that you forgot for the moment what your old grandfather used to say to you, quite as often as you wished to hear it, "never give up a certainty for an uncertainty." And now as you look out at the heavy masses of black clouds, that with the strong east wind give indication of a long storm, you don't care to acknowledge to yourself even, that if you had "let well enough alone," your "best hay" would now have been nicely stowed away in your barn. You don't want to let Mrs. L. and the children know that the vicious animal you have exchanged kind Nell for, despises a horse rake, and will have no more to do with it, than you with a subsoil plow. As the music of neighbor Prentice's rake resounded in your ears this afternoon what were your feelings? I fancy you felt something as you would have done, were you doomed with pinioned hands to listen to the music of your nearest neighbors, and those neighbors were—*musquitoes!*

But we will let it all go, as Jerry said to himself; we'll let it go, as the money which you saved to pay for that rake, and to pay for this week's hired hands, has gone to pay the difference in value between a kind family horse, and as vicious and good for nothing an animal, as you will often find on a farm.

"But hark! what is that rumbling noise," exclaimed George. "It wasn't thunder, no; ah, it's the stage just come over the bridge."

"I know somebody's coming here—it don't come this way for nothing. Let us all run for the front door; it is going to stop here—who can it be coming here in the stage coach?"

"Umph! think I don't know," exclaimed Bill, "it's somebody made a mistake;" and he was about to rectify the same, when an exclamation of joyful surprise and recognition from the father prevented him from so doing.

"O, it is Aunt Fanny," exclaimed every one, as the coach door was swung open and Mr. Lee and the driver assisted a grave-looking lady to alight. A warmer and more hearty welcome, Fanny Lee never received after a long absence, not even when she had upon that same threshold, been clasped in the arms of her own dear father and mother.

Long years had no power to dim the affection of that brother for his only and orphan sister. Fanny was, as we have said, Jerry Lee's only sister,

and while with her brother, she inherited from her mother a large share of "good nature," she also possessed much good sense, or as Aunt Judy used to say, a "dreadful sight of discrimination."

Be that as it may; yet we are sure that Fanny, reserved and quiet as she was, exerted a silent, but powerful influence wherever she moved.

Her hand seemed to shed abroad order, regularity and peace, and under her eye everything found its proper place, and everything was done at the proper time. As Jerry said to his wife, "Fanny has such a pretty way with her, and then she always had, and then she sees into anything so quick; 'tis true, she makes no noise or palaver about it. But did you mind how quick she noticed my wet hay—and also that the Prentice field was all clear! One word from her is enough, although she never twits one about one's bad luck."

No wonder the children loved Aunt Fanny, for she was a capital story-teller.

"Done reaping! done, all done," exclaimed Bill, as entering the kitchen he tossed his cap on the hook, "and now if Aunt Fanny would like it, father says we may all go down to the oak pasture. Are you rested, Aunty? over a week since you came." Aunty was rested, but of course she well knew the children would enjoy the walk quite as well when haying was over, to say nothing of the additional pleasure of having Mr. Lee's company.

"All ready, Aunt Fanny, all ready for that walk! Father says we must be quick, for that good for nothing horse wont stir an inch, and father says we must walk all the way; but it is so pleasant we wont mind, will ye, Aunt Fanny," said little Ellen, as she placed her little warm, soft hand in Fanny's, and with father and the boys before, proceeded down the hill, and over the bridge.

And now as little Ellen leaves Aunt Fanny, and joins the boys in their search for berries, let us follow the brother and sister.

As they pass the old moss-grown and dilapidated school house, memories come rushing back—days of their happy childhood; and now, seated on a rock, beneath a wide-spreading oak, as Mr. Lee recounts one by one his plans for the future, and his bright hopes of success, why did that sister remain silent, till urged by Mr. Lee to give her opinion in regard to the matter?

"I reckon you don't think much of farming," Fanny. "You've been down south, where labor is disreputable and degrading, and I guess you, with all your New England sense, can't shake off this feeling in a minute. Nothing strange, though, but I tell you Fanny, farming is the best business in the world, if well followed."

"Well managed."

"Yes, sister, I calculate if you come to see us half a dozen years hence, to show you a little of the profits of farming—there, do you see at the foot of the hill, those men digging that deep ditch, there in the Nelson swamp?"

"Yes, what of it?"

"Nothing, only that is what I call a fair specimen of folly, or mismanagement. Money thrown away. Would you believe it, if I were to tell you that the clearing of that piece of land cost Prentice two hundred dollars, and I think sixty more, at least, will be expended in draining it. Money out of pocket. I longed to tell him better, when

he told me this, but then it would have been useless; well, some must buy their experience, dearly, too.

"Well, Fanny, I wouldn't say it to every one, but 'it is an ill wind that blows good to no one.' That farm will have to be sold again, no two ways about it. I don't want it exactly, that is, I don't need it; it may do for one of the boys—it's handy, say, what think of it, Fanny?"

"Brother, mine, did I ever differ from you, needlessly, foolishly? Your attachment to this home of our childhood cannot be stronger, or more enduring than mine.

"Often as I have reclined beneath the beautiful dark cypress of Alabama, have my thoughts wandered back to this very spot; yes, often in imagination, have I been seated upon this rock, beneath the branches of this wide-spread oak, where were passed many hours of our fresh and happy childhood, and affection's long slumberings have been recalled in all their purity. And how has my bosom yearned towards home! You need but to go where I have been, to see what I have seen, to know the true *dignity of labor*. Where such pleasant homes, where such pure hearts as here in New England! You have but to see as I have seen, the effect of sloth, indolence, exemption from labor and care, to appreciate your own highly-favored position, that of the 'tiller of the soil.'

"But brother, I must speak plainly; beware, lest in avoiding what you consider a useful expense, you commit a greater error. No matter if you do not put the cash in your pocket, if you make a free and happy home for your own family, if with pure and loving hearts you find and cherish what money cannot buy in this selfish world, true happiness, then be content.

"But do not suppose for one moment, that money uselessly expended in improvements, or rather supposed improvements, for may be I shall differ from you there, is the only evil to be avoided.—There is an evil, greater than all the ditching and subsoiling of which you have been speaking. It is an improvident, careless, neglectful way of farming, which brings misery and want in its train. 'He that dealth with a slack hand,' you know the rest of it, brother.

"By the way, have you thus far been successful in your plans—have your expectations been realized—do you know how you stand—what is your yearly income?"

"O, well, ahem, I don't exactly know, now; but then 'I am going' to reckon up one of these days, and then I can tell; but then you must know, Fanny, that keeping accounts, &c., on a farm, is what one can do or not, just as one chooses; it's well enough, though, if one has plenty of time to do everything, no harm perhaps can come of it, then, but hang it, (excuse me sister) if I would have the name of my wife's keeping books or accounts for me if 'twas never done. They say Mrs. Prentice assists her husband in such matters."

"I shall begin to think quite highly of this Prentice family, if I remain here through the season, I suspect," replied Fanny with a smile.

"O, I have nothing against them, save perhaps a little prejudice; it's their *management*, I speak of," said Mr. Lee.

"Now, Fanny, don't you remember Major Simes! Well, he undertook to manage something after this fashion; he bought new-fashioned tools

of all descriptions; drained all his low lands, grafted his apple trees, and tried all sorts of book farming, took I know not how many agricultural papers, and what was the end of it, do you remember, Fanny!" said Mr. Lee with a triumphant smile.

"Yes, I remember it all, and do you remember when we children went to school, how the tools and machines all lay by the road side, piled and covered with snow—what strange fantastic forms they were; how the gates were off the hinges, fences down, and the cattle traversing the fields, breaking the young fruit trees, the well sweep broken, and the pole with a tin pail fastened on the end to draw with?"

"Do you remember how you used to snow-ball the house where no smoke issued from the chimney, on your way to school in the morning, with no fear of a remonstrance from its inmates, who seemed to care for nought but 'a little more sleep?' Do you remember how 'his grafts' died for want of care! and again my memory is not at fault; if Major S. read agricultural papers, you and I know he never paid for them!"

"Yes, Jerry, I remember all these things, and it was not book farming that ruined him, it was down-right—shall I say it, brother, *shiftlessness*; not a very pretty word, is it? If the Major had united habits of regularity, industry and economy, with energy, his book farming could never have harmed him; but, alas! all these important requisites were wanting.

"As well might you suppose that the locomotive which is now flying past us in the distance, would reach its destination with its burden of living freight, at the given time, safe and sound, without wood or water, and the constant and unwearied care and oversight of man,—as to think farming, with the most complete tools to work with, and correct ideas of their use, can be made a profitable or useful employment without a systematic arrangement of one's affairs with skill and prudence, and the same order which is requisite to render any other business prosperous.

"In truth, brother, I do not believe it is a *money-making* business; but that is of little consequence; do not teach your children that money-making, is of the most importance, but tell them by your example, that 'money is nothing, that greatness is nothing, that *goodness* is the real jewel in the casket,' and learn them to cherish it well. And brother, let me again speak plainly, do not let cares press too heavily upon your wife. You may not have noticed as I have, that Ellen is looking quite care-worn; believe me, brother, 'tis not time alone, that has deepened and widened the furrows on her pale brow—hard work, brother—hard work!"

How long the conversation would have continued, we know not, had not the sound of merry voices and the lengthening shadows told them it was time to return.

As they neared the house, Mr. Lee was accosted by a man awaiting his return. "I called for to settle up that little account with you, 'squire; shouldn't be particular, but I talk of going away, and I thought 'twould be handy to pick up enough so as not to be put to it for money to pay my expenses, ye see—thought 'twould be well enough to 'square off.'"

"Well, yes, ahem; how much is there due, Mr. W.?"

"Have you looked over your account, 'squire?"

"No, not lately."

"O, well, your books will tell, I suppose."

"I believe I didn't put *that* on the book, (be careful, Jerry, you have no book) but I made a minute of it on a piece of paper. Do you remember any thing of a piece of bluish white paper, with figures on it, mother?"

"I have seen several such pieces, and I will bring them to you." Mrs. Lee left the room and soon returned with a handful of bits of paper, but the desirable one was not in the parcel; the children were now called in—they had been having a fine frolic with Aunt Fanny, removing an ox sled, which the last snow of March had left as an ornament near the front door. "I wish you'd mind your — I was going to move that myself," said Mr. Lee, with some impatience; he did not say *when*, but he would have done it, I dare say, the first good sledding.

"Children, come in, and tell me if you have seen anything of a piece of bluish-white paper round, with figures on it. George, do you know anything about it?"

"No, sir—but I will look where you say."

"Well, take all the drawers out of the secretary, move everything and see if it is there. William, you go and look in all the table drawers, while I look in my pockets." The drawers were emptied of their contents, and after, with much satisfaction, spying all the wonders, the children returned from their fruitless search. They finally concluded that it was no where to be found.—Fanny Lee thought she perceived a gleam of satisfaction light up the half-shut grey eyes of the visitor, as this conclusion was settled.

"We must fix it the best way we can," said Mr. Lee, as he took down pen and ink from the shelf.

"I guess we can fix it," said Gray Eyes. "I calculate to do what's right always." At this moment, to his great relief, Mr. L. remembered putting some figures upon the cellar door, and those might be the very ones; he at once proceeded to the door; but wo to the housewife who erases figures in house-cleaning—there were no traces of chalk now.

"What have you for a bill against me, Mr. W?"

"Why it amounts to eighty-four dollars."

"Zounds! Mr. W., you are surely mistaken, surely."

"Well, well, you know you've something agin' me that has got to come out on't."

"Yes, yes, but how you can have charges against me, to that amount, is more than I know."

"Now Mr. W., just read over the various items, as you have them."

Mr. Lee was perfectly sure many of these were unjust, but as he had nothing to bring forward to disprove the same, and as W. agreed with him on his own side, he was not a little perplexed.

"Wall, I guess you had better settle it now, Mr. Lee—I am, you see, uncommon particular about my business—keep things square and fair—posted up, and always sure my dates are right."

"Yes sir, but I have those very same charges of yours, somewhere, on a piece of paper, and I am positive, sir, you have charged me thirty dollars more than you agreed. All I ask of you, sir, is to let the matter rest where it is, until I find that paper."

"You see, Mr. Lee, just now I am fixed. I am going away, and I felt obliged to leave my business with a lawyer, but I hated to put to trouble an upright man like yourself, so I rode over from town a purpose, to save you from any hard feeling. I want you to be satisfied."

Mr. Lee was fully aware that he was now in the hands of a "Shylock," but he had not a particle of proof to bring against his demand.

"I'll tell you what I'll do, Mr. L.—I'm short, and must have the cash, but I shall be round here about a week or so, and if you find your account, bring it over to me, and I'll pay you back the money if I'm wrong; ain't that fair enough, Mr. Lee? I call myself putty ginorous there!"

Very reluctantly, Mr. Lee paid the demand, and as his visitor was stepping into his wagon, he again says—"A week hence if you find any flaw, I'll fix it right for you—good-day sir."

For several days Mr. L.'s spare time was spent in fruitless search for the paper, until one stormy evening, he took from a peg in the kitchen an old hat, which he had ceased wearing; and there, tucked away under the lining with several others of considerable value for company, was the identical paper, soiled and worn, so as to be hardly readable.

It plainly proved, as Mr. Lee was before convinced, that he had overpaid it by thirty dollars.

Early the next morning he hastened to the village to rectify matters with W.; but true to his character, "Old Gray Eyes" left for the West, as he intended, the very night he received the money.

He was, as Dickens says of Mr. Smallweed, "a two-legged, money-getting, species of spider, who spun webs to catch unwary flies, and retired into holes until they were entrapped." Knowing the careless business habits of Mr. Lee, he succeeded in his purpose, with but slight difficulty.

"I am unlucky," said Mr. Lee, as he returned "but I will let it go, and say nothing about it."

For a moment only, a tear glistened in Fanny Lee's dark eye, as she gave the parting word and kiss to her dearly beloved brother and his family.

A week after Fanny's departure, a box arrived containing presents for the children.

"Why, what is this queer thing!" exclaimed Billy, as his father was reading the letter.

The "queer thing" was a neat mahogany writing desk, containing a day-book and ledger and some little memorandums to be filled.

"Why, this is *father's present*," said Mrs. Lee, as she read the letter which her husband passed to her while he examined the desk and its contents.

"This, my dear brother," said Fanny in the letter, "this present, please accept, and if well used, it may prove a sort of leather-patch upon your pocket; and should a kind Providence permit me to meet you and yours, years hence, may I find it well filled."

Six years—how rapidly do they pass, and yet how many events may be crowded in a briefer space of time. Six years have passed since Fanny left the old homestead, and now a bright, blazing fire burns on the hearth, and the family are seated round it, all but Mr. Lee and Fanny, who were busy writing at a table, a little back. The chil-

dren—how happy they look—Mrs. Lee sits in the easy chair trying to smile, but 'tis a sad smile.

"Well, Fanny," exclaims Mr. Lee, "I never should have thought it, how thankful I am you have come." (Aside to Mrs. Lee.) "Isn't it time for the children to go to bed mother?" "Yes, eight o'clock, good night." The two eldest were permitted to remain a short time longer.

"As I was going to say, Fanny, I don't know what I should have done if you had not come. I did not think it was half so bad, but I never had the heart to look difficulties fairly in the face as you have. Well, it is better to know the worst, even if one can't see one's way out of trouble—but I declare, I can't see where it has gone, I am sure you've been prudent, Ellen, and worked hard all the time, but I don't know but farming is poor business, after all."

"Let me see your books, now, brother," said Fanny, "perhaps it is not so bad as you suppose."

"O dear! Fanny, I may as well tell the whole, I have never made a mark in those books—I meant to, but I put it off and off, and finally I let it go."

A look of sorrow, accompanied with a deep sigh, was Fanny's only reply, and as she sat, and with a clear head reduced his tangled affairs to order, he exclaimed,

"Fanny, you would make a *capital lawyer*; there, I didn't mean to say so, for I *hate* lawyers, cheating rascals! Ah, they have got more out of me than they ever will again!"

"Why did you meddle with them, then?"

"I—I didn't, but you see others—"

A tittering and whispering between the boys caused the father to leave the remark unfinished.

"What pleases you, William! What are you laughing for?"

"Nothing, only I was thinking Aunt Fanny would make a better lawyer's *wife*."

It was now Fanny's turn to smile, and *blush* too.

"Eh, I guess I know something—George Prentice told us about it!"

"About what?" exclaimed Mr. L., with unfeigned surprise.

"About Aunt Fanny—how she is going to marry his uncle, Mr. Prentice's brother, a lawyer!"

Aunt Fanny was still busy, and it was thought best for the boys to go to bed.

"Why, Fanny, why didn't you tell us about this before," said Mr. L., as the boys left; "I never dreamed of such a thing!"

"As you did not think much of these neighbors, when I was here last, perhaps you will object."

"I always said Prentice was a fine man; I only thought—but no matter now, what I thought. To tell you the truth, sister, everything he puts his hand to prospers. If I had anything to do *with* now, I would manage this farm as near like him as I could, for I believe he is a safe man to follow. But I want you to tell me just what to do—you see just how my affairs stand—my indebtedness is so much; I did think of moving in town and taking boarders, but it would be too hard for Ellen, we could not afford to hire help. What would you advise me to do, Fanny?"

It is none of *our* business *how* matters were settled, it is enough for us to know that Mr. L.'s affairs were adjusted to the satisfaction of all parties, and Mr. L. remained on the farm; and if for a short time the family felt the pressure of poverty, it only bound them closer together.

"Sweet are the uses of adversity."

'Tis true 'twas rather late in the journey of life, to learn to "stop and know what link in the chain was lost;" but Mr. L. *did* conquer difficulties, and learn, though late came the knowledge, that *difficulties* are not *impossibilities*.

Mr. Lee borrowed Mr. Prentice's "subsoil plow," the next spring, (bad management that borrowing,) but then it is "all in the family" now, and Mr. Prentice takes some pardonable vanity, in speaking of "my sister, Mrs. Prentice."

Mrs. Lee is in feeble health, but Ellen is a good deal of help, and saves her mother many steps, and Mr. Prentice is never tired saying, "she is just like my sister, Mrs. Prentice." One thing more—Mr. Lee would as soon "let the sun go down on his wrath" as to neglect to open and shut that writing-desk, and see that all was right there, before the clock tolled the hour for retiring.

M. F. D.

Brentwood, N. H.

For the New England Farmer.

CRANBERRIES.

MR. EDITOR:—Cranberries have not only become one of our indispensable articles of food, but are also an article of commerce. In 1852, in Massachusetts alone, there were more than \$50,000 worth sold, to be exported to California, besides a much larger quantity exported to England and other countries. That being the case, it behoves those who have bogs or upland suitable to their culture, to improve it to the best advantage, in raising this most delicious fruit for culinary use. It is now five years since I have turned my attention to this subject; I have experimented considerably, and find that cranberries will grow on almost any soil; but the best in low meadows, where but little grass grows. I have succeeded best where it is not plowed summer or winter; where the soil is deep, and before draining it was swimming meadow. I mean when you walk on it, on the turf, it would sink from one to two feet, and then rise again when the weight was removed.—My best cranberries are in a meadow where it was impossible to go on it with a horse. In 1848 I drained the meadow by ditching, so as to make it solid, and took care in mowing not to injure the vines; this has increased the fruit from about 2 bushels to 50 bushels. My hay is in less quantity, but in much better quality, on the same meadow.

I have raised cranberries this year on dry, sandy pasture, in wet, springy swamp, on hillocks, also on the best of mowing land. I have no doubt that cranberries could be cultivated on any soil, with proper care and attention. They may be propagated by roots or seeds. The best way is to select the best kinds, and take up with a spade, a turf that contains plenty of vines, and dig a hole and put it in where you want it, and tread it down hard with the feet; then throw on one or two shovels full of sand or gravel, taking care to make the surface even, and not quite cover the top of the vines. This should be done in the fall, or early in the spring. The first season they will spread almost to meet, if they are put four feet apart, and the next year they will produce fine fruit enough to pay charges and trouble. They will continue to increase if you keep them well provided with a slight coat of sand or gravel every fall or winter.

The vines are easily obtained if wanted, of either the large pale kinds, the oval, or the round or flat kind, which is much the richest, as well as the greatest bearer with us, and of a dark red color.

S. A. SHURTLEFF.

Spring Grove, Jan., 1853.

UNITED STATES AGRICULTURAL SOCIETY.

The First Annual Meeting of the United States Agricultural Society was holden at Washington, on the 2d of February 1853, at 10 o'clock, in the Lecture Room of the Smithsonian Institution.

The meeting was called to order by the President of the Society, MARSHALL P. WILDER, Esq., of Massachusetts.

The States and Territories of the Union were called in the usual order, and members present gave in their names. It was found that members from the following States and Territories were present, viz., New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, Ohio, Indiana, Michigan, Texas, Wisconsin, the District of Columbia and Minnesota.

The Chair requested that all reports from State Societies to this Society be sent to the Corresponding Secretary.

Prof. MAPES, of New Jersey presented specimens of the Japan pea, an account of which we have recently given, as it was presented at the State Board of Agriculture, on the 25th January.

The President then delivered his annual address. It represented the prospects of the Society to be highly flattering; such as should inspire every member with encouragement, and a determination to do all he can towards the furtherance of the great ends of the association. It alluded successively to the subject of the appointment of members of the National Board of Agriculture; the printing and publication of the Journal of the Society, the first of which, consisting of 144 octavo pages, is already in the hands of most of the members, and a second will be shortly issued; the opening of correspondence and co-operation with distinguished agriculturists and local associations all over the United States, which the President thinks should be extended even to trans-atlantic nations, and the assistance of the General Government solicited in regard to it.

The address acknowledges the advantages attending the central location of the headquarters of the Society in Washington, and notices in handsome terms the courtesy of the Directory of the Smithsonian Institution in granting to the Society the free use of their hall. The Society, must however, look around and secure the permanent use of a public building or offices in some existing edifice for the Corresponding Secretary and Treasurer, for the preservation of the records and of the agricultural seeds and products which are now or may be

hereafter acquired, and also for an agricultural library, museum, and cabinet.

It will be necessary soon to employ a permanent Secretary with a salary, whose time and talents will be wholly devoted to the interests and business of the Society. The Treasurer, also, will have to be suitably compensated.

The President submits whether, for the payment of officers, the printing and publication of the journals and transactions, postage, and other necessary and contingent expenses, some aid may not be obtained from Government—

"Either," says Mr. Wilder, "as a grant in furtherance of our objects, on the same general principle as many of the State Governments bestow their patronage upon the agricultural societies within their territorial limits, or, if Government would so direct, as a consideration for the performance by this Society of the duties of the Agricultural Department of the Patent Office.

"The sum now expended by Government in that branch of the Department, if placed at the disposal of this Society, would enable us to collect, through our auxiliaries and corresponding bodies, the most reliable statistics and the most recent and valuable information, and would also enable us to publish the same and to distribute it, through the members of this Society, and of the hundreds of kindred local associations acting in concert with us throughout the country."

In the course of allusion to what has been and might be done for the Society by private munificence, the President stated that—

"A gentleman of fortune, Hon. Samuel Appleton, of Boston, whose name is honorably associated with various philanthropic and charitable enterprises of our age and nation, has the honor of commencing worthy action in our behalf by a donation of one thousand dollars. Several other distinguished gentlemen have subscribed liberally to our funds, in the form either of donation or of life-memberships, a detailed statement of which will hereafter be submitted and published in the Society's transactions."

The following are the concluding sentences of the President's Address:—

"A brighter day has begun to dawn. It is within the recollection of many that the first Agricultural Society was organized in the United States; indeed, it is not fifty years since the establishment of the Horticultural Society of London, the first institution of the kind in the world. This was soon followed by kindred associations in France, Pennsylvania, Massachusetts and other places. Agricultural and Horticultural Societies, and Farmer's Clubs, spring up as by enchantment throughout our country, all zealously engaging in the work of improvement.

While we rejoice in these favorable indications, and in the cheering prospects before us, we are reminded by the absence of those whom we have been wont to meet on similar occasion, that the Destroyer has been among us. They involuntarily rise up before us, and their valuable services claim our grateful remembrance. When we were last assembled in this city, the 'Farmer of Ashland' lay upon the bed of death, and has since been borne with distinguished funeral honors, amidst a nation's sorrow, far hence to the sepulcher of his fathers.

The great Landscape Gardener and Rural Architect of America, upon whose genius the government depended for the laying out and adornment of the

public grounds surrounding these premises, and who did so much to elevate the standard and improve taste in the rural arts, conveniences and refinements of life, was numbered with the victims by that awful disaster upon the waters of the Hudson, on the 28th of last July, which agonized the hearts of so many American citizens.

The cause of scientific Agriculture in this country, has sustained a great loss by the death of one of its most distinguished and promising professors—a gentleman, who, though young, had already made many valuable contributions to Agricultural literature, who had no superior of equal age, and from whose future labors much was anticipated. Downing and Norton are no more—both cut down in the midst of life and usefulness.

One of the distinguished representatives of the Essex Society of Massachusetts, the Hon. Judge Mack, of Salem, who was present and participated in the organization of this Society, a most worthy gentleman, and who filled with honor and integrity various stations in life, has also gone to his rest.

The 'Marshfield Farmer' is also numbered with the mighty dead. He was a farmer,—the son of a farmer, and the noblest production of American soil! His majestic form, his mountain brow and expressive countenance, his deep, yet melodious voice, his whole person eloquent in every step and act, are bright visions on which we delight to dwell.

We fondly cherish the remembrance of him as he appeared in this assembly at the organization of our Society, and in the cordial manner in which he saluted the worthy representative of the immortal Washington, the 'Farmer of Arlington.' We love to think of his subsequent reception of us at his hospitable mansion in this city, and of the close of his eloquent address, and especially of his friendly benediction: 'Brother farmers—I shall remember you, and the occasion which has called us together. I invoke for you a safe return to your homes. I invoke for you an abundant harvest; and if we meet not again in time, I trust that hereafter we shall meet in a more genial clime, and under a kindlier sun.'

Gentlemen—Cheering prospects are before us. I dwell with pleasure on the bright future. I seem to see this Association enrolling among its members thousands of our intelligent yeomanry, and whether from the North or the South, the East or the West, all banded and leagued together as brethren by a common interest; a State Society auxiliary to this in every Commonwealth,—County Societies, Farmers' Clubs, Agricultural Schools and Colleges, each drawing from its own peculiar section and resources the means of information and improvement, and all with united purpose and harmonious action, both disseminating and receiving aid from one another, and thus illustrating the power of voluntary associations under the fostering care of government, and tending to make ourselves and our beloved nation the most intelligent, enterprising, virtuous, happy and powerful people on the earth."

On motion of NATH. P. CAUSIN, Esq., of the District of Columbia, it was

Resolved, That 5000 copies of the President's annual address be printed for distribution, first to members of the Society and then to such other persons as the Executive Committee may approve.

Gen. RUSK, of Texas, in seconding Mr. CAUSIN's motion, spoke handsomely of the address, and thought that its circulation would do much good, and materially tend to further the objects of the association.

J. D. WILSON, Esq., of Wisconsin, moved the following resolution, which was agreed to

Resolved, That so much of the President's address as refers to the co-operation of this Society with the General Government in the diffusion of agricultural knowledge, the distribution of seeds, plants, &c., be referred to a committee of three, with authority to report to the Executive Committee of the Society at such times as may suit their convenience.

The committee finally appointed by the Chair under this resolution consists of Messrs. KING, of New York, BROWN, of Mass., and MEDARY, of Ohio—the mover having at his own request been excused from serving. The Society generally seemed to think Gen. Rusk eminently fitted to occupy a place on this committee; and appeared desirous that he would accept one.

In reply to numerous expressions of this character, Gen. Rusk acknowledged the compliment intended him, but thought, as a member of Congress, he ought not to be on the committee. He hoped to serve the Society in Congress in his legislative capacity, but if he accepted this place on the committee, it might be said to him in Congress that he was but fighting for his own bantling. The following resolution, by Mr. KING, of New York, from the committee to which was referred the recommendation of the President's address as to funds, &c., was adopted:

Resolved, That the Executive Committee be requested to make immediate application to Congress for that portion of the money now annually appropriated to the Patent Office for the preparation of the Agricultural Report and the collection and distribution of seeds, with the view to the performance of the same work by the United States Agricultural Society.

On motion of Dr. ELWYN, of Penn., it was voted that a number of copies of the President's address, when printed, should be placed at the disposal of the Smithsonian Institution for distribution.

The same gentleman moved for a committee of one from each State to nominate a list of officers for the current year, which motion was adopted.

A motion of Mr. SMITH, of the Dis. Col., for the Society to hold an exhibition in connection with the Metropolitan Association, was referred to the Executive Committee, as also the subject of the connection of the Society with the Smithsonian Institution, respecting accommodations, and the subject touching a Permanent Secretary. That concerning agencies received the same disposition.

Upon the question of joining the Crystal Palace Association in their intended exhibition at New York, an animated discussion arose. The gentlemen who took part in this discussion were Messrs. Roberts, of Pa., King, of N. Y., and King, of R. I., Calvert, of Md., Brooks, Brown, Poore, French and Reed, of Mass., McAllister, A. B. Davies, Landry, Watterston, Dis. Col., Mapes, Judge Chatfield, of Wis., and Medary, of Ohio.

The discussion was finally closed by the adoption of the following resolution of Mr. BROWN, of Mass.

Resolved, That this Society do not consider it expedient, in its infancy, to enter into an arrangement

with the Directors of the Crystal Palace, at New York, in relation to a public exhibition; and that the Chair appoint a committee of three persons to inform the committee from that association accordingly.

The committee appointed under this resolution are the President of the Society, Brown, of Mass., and Medary, of Ohio.

It was resolved, on motion of Mr. POORE, of Massachusetts, that when this meeting adjourn it adjourn to meet to-morrow morning, at 9 o'clock.

The Chair appointed Messrs. French, of Massachusetts, King, of New York, and Calvert of Maryland, a committee to audit the Treasurer's accounts.

The following preamble and resolution were offered by C. B. CALVERT, Esq., of Maryland, and made the order of the day for to-morrow at 10 o'clock, A. M., viz:

Whereas the cause of agriculture requires that its great interests should be represented in the councils of the nation: Therefore—

Resolved, That Congress be memorialized to establish a Department of the Government, to be called the *Department of Agriculture*, the head of which department, when established, shall be a Cabinet officer.

And then, on motion of Mr. KING, of New York, the meeting adjourned.

SECOND DAY.

The Society met according to adjournment, yesterday morning, at 9 o'clock, in the lecture room of the Smithsonian Institution. It was called to order by the President at 10 o'clock, when it was found that, in addition to the States and Territories present the previous day, Minnesota was now represented.

The order of the day being the resolution of Mr. CALVERT on the subject of memorializing Congress to establish an Agricultural Department of the Government, with its head a Cabinet Officer, was then taken up. It was, however, laid on the table temporarily, to receive the report from the Committee on Nominations.

After some discussion, this too was laid on the table, in order to consider the report of the Committee on Amendments to the Constitution. The sections of the constitution in question were then successively read, and in several cases amended.

The following is the substance of the principal amendments passed:

The Executive Committee was increased from five members to seven.

The Recording and Corresponding Secretaries to be considered as ex-officio members of the Executive Committee and the General Board of Agriculture.

In the absence of the President of the Society, the Executive Committee shall elect its own chairman.

Four members present shall constitute a quorum of the Executive Committee.

The future annual meetings of the Society shall be held in Washington, on the *fourth* Wednesday of February.

Mr. WHEELER, of Massachusetts, proposed a reduction of the fee for life-membership from \$25 to \$10, with two dollars entrance money and one dollar annual subscription. This reduction he thought would bring many members into the Society who might be excluded by the present terms. This opinion was favored by Mr. BROOKS, of Massachusetts, and by Professor MAPES and Dr. WESTON, so far as regarded life membership, but was strongly opposed by Messrs. A. B. DAVIS, Jones and Calvert, of Maryland, Roberts, of Penn., and Reed, of Mass. The Society finally determined not to make any change now.

The order of the day, on Mr. Calvert's resolution, was then taken up, but temporarily laid aside to consider a resolution moved by Mr. BROWN, of Massachusetts, which was unanimously adopted, as follows:

Resolved, That the thanks of this Society be tendered the Hon. Samuel Appleton, Thomas H. Perkins, Josiah Quincy, Robert G. Shaw, and others, who have so generously contributed to its funds, and thereby increased the ability of the Society to diffuse agricultural information throughout the country.

The following gentlemen were then proposed as honorary members of the Society, the proposition being warmly received and adopted, viz.: MILLARD FILLMORE, FRANKLIN PIERCE, SAMUEL APPLETON, THOMAS H. PERKINS, JOSIAH QUINCY, and ROBERT G. SHAW.

Mr. CALVERT's resolution being read, he said that he had waited for some one else to take the initiative in this matter: but, as that had not been done, he had nothing to do but to act for himself. The object sought in the resolution was a primary one of the Society. The only question to be asked in relation to it was, will a Government department of Agriculture benefit the farmers of this country; will it maintain, protect, and advance their varied interests and all the other interests dependant upon theirs? If the answer was in the affirmative, nothing remained to be done but to go straight to the mark, and vote unanimously a petition to Congress for its establishment. It would do no longer to connect this great matter with party politics; no longer would the agriculturists of the United States be nose-led by political partisans. Commerce has its representative and protector in the Cabinet in the person of the Secretary of the Treasury; so had the army, so had the navy; then why should agriculture, an interest greater than all the rest put together, be excluded? Four-fifths of all the wealth, power, numbers, labor, and elements of strength and greatness of this country were agricultural, and it had no representative in the Executive branch of our Government. Measures hostile to the farming interest may arise in the Cabinet and be recommended to Congress, and as at present constituted they could not be resisted. This question had indeed much

to do with politics in its higher and proper sense, but in the lower and meaner one, nothing whatever. Let any one refer to Noah Webster's Dictionary, and they would be convinced of this. Last year a bureau of agriculture would have satisfied gentlemen, but that day is gone by; what is wanted now is a full department, with a full Cabinet Minister at its head. All the Presidents of the United States have recommended such a department, and the time had come to establish it. He hoped the meeting would be unanimous in its vote on this subject.

Mr. FRENCH, of Massachusetts, said he was one of those who would have been once satisfied with a Bureau, but he now called for a Department, and he proceeded to advocate a Department, as proposed by Mr. Calvert.

[While Mr. F. was speaking, the President of the United States and the Secretary of the Interior entered the room, when the members rose to their feet, and so remained until the President was seated.]

Professor MAPES said his friend from Maryland had stated the outline. Had he gone into detail, the fact that four-fifths of the people were allied to agriculture would be made more strongly to appear. In some districts of the United States one hundred bushels of shelled corn to the acre were raised, but the average was only thirty bushels.

This last proportion ought to be and could be greatly increased, and the land restored to fertility. In the State of New York twelve and a half bushels of wheat per acre was the average; formerly it was thirty. Ohio once gave an average of thirty-five; she had now sunk to fifteen. To restore the decreasing fertility and wealth of our fields all over the Union, was a measure deserving the serious attention of our Government. Therefore let us have a Department.

Farmers are a busy class; they have not much time to think or to compare notes with their fellows at a distance. Thus improvements did not travel fast. A town or a county was often the limiting area of the knowledge of a great improvement. Much knowledge useful to all was thus lost to the generality. For instance, there was the fact that eighteen and a half pounds of cooked corn meal would produce as much meat and muscle as fifty pounds uncooked. But farmers would not believe this without endorsement from a known and respectable source. In almost every county in the Union some one man was celebrated for his crops; but, notwithstanding they were before the eyes of his neighbors, they would not believe him as to his own accounts of his success; they would ascribe to him some secret plans, or something more than appeared. The farmers, as a class, were incredulous. It was necessary to bring the force of fashion to bear upon them. When men of talent, learning, and wide influence lent responsibility to statements, farmers would believe, but not till then.

Much labor was necessary to open the eyes of the people of this country to these things. Happily, within a year or two, we had taken a better view, and the result was, that the improvements for a single year were worth more than the gold returns from California could be in a century.

At the port of New York, British ships would come and fill their holds, on their return voyage, with American bones, carrying away the chief constituent of the fertility of our fields, *phosphate of lime*. And this helped us to understand why, when our fields were parting with their invaluable constituents, the fields of England had raised their crops from fourteen bushels per acre to fifty-one bushels. Let this be stopped; let us understand what these things mean; let our people be put on their guard against these insidious attacks on our very vitals; let the Government have a Department presiding over this branch of our national store, and we shall not be likely long to waste our own strength and vitality by tamely yielding them over to others. [Applause.]

The resolution of Mr. Calvert being then put to vote, it was unanimously adopted, as follows:

Resolved, That Congress be memorialized to establish a Department of the Government, to be called the *Department of Agriculture*, the head of which Department, when established, shall be a Cabinet officer.

The report of the nominating committee being next in order, the officers for the next year were elected by ballot.

[At this stage the President of the United States and Secretary of the Interior retired, the members all standing until they had left the room.]

The following are the gentlemen elected to the respective offices of the ensuing year:—

PRESIDENT,

MARSHALL P. WILDER, of Massachusetts.

VICE PRESIDENTS,

Ezekiel Holmes, of Maine,	Samuel Medary, Ohio,
G. W. Nesmith, N. H.	Robert Mallory, Kentucky,
Frederick Holbrook, Vt.	M. P. Gentry, Tennessee,
B. V. French, Mass.	Joseph A. Wright, Indiana,
Joiah Chapin, R. Island,	S. A. Douglas, Illinois,
S. D. Hubbard, Conn.	R. Atchison, Missouri,
Henry Wager, New York,	T. B. Flournoy, Arkansas,
James J. Mapes, N. Jersey,	J. C. Holmes, Michigan,
Fred. Watts, Pennsylvania,	— Baker, Florida,
C. P. Holcomb, Delaware,	T. J. Ruak, Texas,
W. D. Bowie, Maryland,	W. F. Coolbaugh, Iowa,
G. W. P. Custis, Virginia,	A. C. Ingham, Wisconsin,
Henry K. Burgin, N. C.	— Homer, California,
John Witherspoon, S. C.	J. H. Bradley, Dist. Col.,
P. M. Nightingale, Georgia,	S. M. Baird, New Mexico,
Richard Jones, Alabama,	H. H. Bibley, Minnesota,
Alex. H. Bequa, Miss.	Joseph Lane, Oregon,
A. B. Roman, Louisiana,	Jos. L. Hayes, Utah.

EXECUTIVE COMMITTEE,

C. B. Calvert,	Moses Newell,
J. A. King,	Arthur Watts,
A. L. Elwyn,	Richard Peters.
J. D. Weston.	

Joseph C. G. Kennedy, *Corresponding Secretary*.
W. S. King, of Rhode Island, *Recording Secretary*.
William Seiden, *Treasurer*.

Whilst the ballots were being counted, the Vice President of the Society, G. W. P. CUSTIS, Esq., of Arlington, addressed the meeting with great unction and effect, detailing in a most interesting way

his agricultural experience, and the incalculable benefits conferred upon him and the whole farming interest of Virginia by the genius and industry of Edmund Ruffin. If ever a conqueror merited a wreath, then did this conqueror of ignorance, bigotry, and agricultural desolation. After handsomely alluding to Mr. FILLMORE, now shortly to retire from the labors of office, to go back to his farm; to his country's father and friend, the Farmer of Mount Vernon; and to the farmers and sons of farmers whose hearts and arms gave success to the revolution, Mr. CURTIS concluded with the sentiment of "Speed the Plow," and may health, happiness, and glorious success attend the Society and its efforts. [Cheers.]

The PRESIDENT of the Society acknowledged the kindness of Mr. CURTIS's remarks, and reciprocated by wishing him, on behalf the Society, in return, all the blessings of health and prosperity.

Professor MAPES moved that Edmund Ruffin, of Virginia, be elected an honorary member of the Society.

Carried unanimously and with applause.

Dr. REED, of Massachusetts, offered a resolution, which was passed, as follows:—

Resolved, That the subject of lectures before this Society at its future meetings, and the selection of lecturers, be referred to a select committee of five, of whom Professor Henry, of the Smithsonian Institution, shall be chairman.

The committee appointed under this resolution consists of Professor Henry, and Messrs. Wilder and Reed, of Massachusetts, Calvert, of Maryland, and the Corresponding Secretary.

It was made the duty of the Corresponding Secretary to notify all members of their election, and if any decline, the Executive Committee may appoint others to fill the vacancies.

A paper written by Professor BOOTH, of Philadelphia, on the inadequacy and inability of chemical analyses of soils in the present state of the science, was read.

Professor MAPES hoped it would not be placed among the transactions of the Society, as he differed with its able and learned author on the subject, and believed he could successfully disprove his positions. There was evidence on every hand, both in England and America, that chemical analyses had done the greatest amount of good to agriculture.

The Society having understood, at length, that the paper of Professor BOOTH was not before the Society, under his sanction, it was withdrawn, to be placed under the control of the gentleman who first produced it.

Resolved, That a circular, in the name of the Society, be addressed by the Corresponding Secretary to the various Agricultural boards and Societies in this Republic and in other lands, requesting, if convenient, copies of their reports already published, with an exchange of future publications.

The Treasurer's report was then handed in. On the meeting of the Society on Wednesday morning there were \$182 62 to the credit of the Society; since then this had been raised to \$1,920 62, which was their present wealth. [Cheers.]

The meeting then adjourned to meet again at 7 P. M.

THIRD AND CONCLUDING SESSION.

The Society met, pursuant to adjournment, at 7 o'clock P. M. on Thursday, to hear the lecture of Professor MAPES on "Fertilizers." This very able gentleman, and practical agriculturist, enchaind his auditory for about an hour as very few living men could do on such a topic. He spoke without notes, but such is his fund of information and intelligence that possibly his extemporaneous addresses excel the generality of written effusions on these subjects.

After the addresses, the EXECUTIVE COMMITTEE met and transacted much business respecting arrangements and agencies for the collection of funds, for the publication of the Journal, for which original papers were promised by Professor MAPES, Mr. CALVERT, Dr. ARTHUR WATTS, Dr. ELWYN, and Jos. C. G. KENNEDY.

The committee requested a copy of the Address of Mr. CURTIS for publication.

Professor HENRY was elected an honorary member of the Society.

After the transaction of business of minor importance, the Executive Committee adjourned *sine die*.

For the New England Farmer.

SWEET CORN.

A correspondent of the *New England Farmer*, among other pertinent questions, asks, "How does sweet corn affect the soil on which it is raised? has it been tried as food for stock? and if so, with what success?" We have had some little successful experience, for the last five or six years, in raising sweet corn, for the table, and for fodder; and that experience has taught us that sweet corn exhausts the soil just about in proportion as the stalk is larger and more nutritious than the northern yellow corn. The kind of sweet corn we have raised grows about eight feet high, the ears eight or ten inches long, large white and plump kernel, and ten rows to the ear, the pith of dark red color, and is called the Evergreen Sweet Corn. The seed was procured from Ohio some eight years since. For fodder we sow it in drills, three feet apart, and drop the kernels from six to ten inches apart. The yield of fodder the last year was at the rate of seven tons to the acre. Our horses and cows leave the best of hay to luxuriate upon sweet corn stalks, well cured, and run through the straw cutter. The stalks of the sweet corn are large, and require much care in curing to prevent mould. They should stand erect in the barn, or wherever sheltered, and enjoy the benefit of air. Cutting the stalks as near the ground as possible, we leaned the tops of two rows together, leaving here and there a stalk uncut, and tying from ten to twenty stalks together

near the top, to prevent falling. In this manner the stalks dried rapidly, and gathering them before the heavy and late rains, we have not lost a pound of fodder. Sweet corn should be planted, or sown in drills, or broad cast, (if any prefer,) at the same time that common corn is planted. The richer and deeper the soil, the more sure and abundant the crop. We have about a bushel of sweet corn for seed, and can accommodate a few early applicants with good seed, if it be wanted, at the rate of fifty cents per quart.

E. P. WALTON.

Montpelier, Vt., Jan., 1853.

LEGISLATIVE AGRICULTURAL MEETINGS.

FOURTH MEETING—TUESDAY EVENING, FEB. 8, 1853.

The fourth meeting of the series was held at the State House, on Tuesday evening. Hon. SETH SPRAGUE, of Duxbury, was called to the chair, whereupon the subject of discussion for the evening was announced, as follows:—

“The best method of breaking up and pulverizing soils, and the depth of this process best adapted to ordinary cultivation.”

Mr. HOWARD, of Boston, read a letter from Mr. PROCTOR, of Danvers, (who was unable to be present) submitting some remarks in relation to this subject. Pulverization of soils he regarded as the basis of cultivation. However large a plant may be, its extreme rootlets will be of the smallest possible dimensions, and consequently the soil should be loose and free, in order to present no obstacles to their growth. Plowing, of course, is the most efficient means of stirring up the soil. As to the depth of plowing, agricultural societies seem to fix upon six inches as the standard, which Mr. Proctor thought was founded on the system of using only one yoke of oxen in the operation. He was of opinion that larger teams should be used and plowing carried deeper, say to 9 or 12 inches depth, especially when the soil rests upon a hard pan. He knew of no crop that would not grow better when the soil is stirred to that depth, than when plowed six or seven inches. Additional manures will convert the gravel and sand which may be thrown up into good soil, in a few years.

Mr. SPRAGUE thought there might be a question in some places as to the best instrument to be used in preparing the soil for cultivation. Plowing is the only mode which the farmers of this country can use. He alluded to the improvements which have been made in the plow in this country, and to the fact that an American plow had carried away the highest prize at the World's Fair, in London. This event demonstrates the fact that the farmers of this country possess the best plows that the world can produce for preparing the soil for planting. Mr. Sprague thought there was a great lack of skill among our farmers in the art of plowing. The plow should be made to run just such a depth, and the furrow slice proportioned to

the depth. The soil is better pulverized when this precision is gained. Plowing, as a general principle, should be deep. But it depends upon circumstances as to whether or no land should be plowed deep. Subsoiling some lands, if they are not properly drained, makes them more capable of retaining water than of raising good crops. He spoke of the *clod-crushers*, an implement used in England, made like a roller with teeth or pikes to break the clods in pieces, which is valuable on some kinds of land.

Hon. AMASA WALKER spoke of the importance attached in England to a thorough pulverization of the soil, a fact which he said was strikingly indicated by the great number and different kinds of plows which they used. At the manufactory of Ransom & Co., in Ipswich, Eng., he had seen 107 different kinds. Some of these had 54 different mould-boards, and some 40 shares. There were one thousand different patterns of plowshares. All these modifications were intended to meet the requirements of the various kinds of soil. The complement for one farmer is generally twenty-five plows. But, for all this pains-taking, we have the best plows. The speaker enforced the necessity of a thorough breaking up of the soil, as being essential to the thrifty growth of all agricultural production.

Mr. SHELDON, of Wilmington, recommended the use of the Michigan subsoil plow for breaking up grass lands. The depth of plowing he believed should be decided by the judgment of the farmer. Some varieties of land need to be plowed a great deal more than others. This should depend in a great measure upon the amount of manure that will be bestowed upon the soil. If plowed deep, it requires more dressing than if plowed shallow. We, however, seldom plow deeper than we ought. He thought from seven to nine inches was deep enough to plow on common land. Mr. Sheldon also alluded to the benefit arising from skilful plowing. He believed there was a great saving in plowing straight. It makes much better finished land.

Mr. DARLING, of Leominster, said that in plowing, regard should be had to the use which is to be made of the land. If he had a piece of grass land which he wanted to use for corn, he would plow it in the fall about three inches deep, and leave it for the frost to work upon and finish. Frost will tear it completely in pieces. In the spring if he were going to plant in furrows, he would harrow it, spread on his manure, and then cross-plow it. By this mode not a particle of turf is left on the ground or in it. He had never seen anything so effectual as this for pulverizing the soil.

Mr. COLLAMORE, of Pembroke, inquired the nature of the soils which Mr. Darling had treated in this way. His experience had been that on a

loamy, sandy soil, plowing in the fall was injurious.

Mr. DARLING replied that they were generally a light, mellow loam, on the hills the soil was clayey. He believed that the system he described had been found to apply equally to the clayey as the other kinds of soils.

Mr. WALKER was of opinion that common sense must be applied to this matter of plowing, as well as to everything else. A gentleman of his acquaintance had heard a great deal said about deep plowing, and determined to try it upon a field of light soil, underneath which was a very coarse gravel. Plowing deep, he brought this to the surface, covering up the natural soil, and consequently lost the use of his land. With such soils the policy should be to draw up the sand or gravel little by little, and gradually convert it into a soil by the application of manure. In a few years a soil may be increased from six inches to a foot in depth, and thus doubled in value, for it will grow double the crops.

Mr. SPRAGUE was confident that fall plowing in dry, sandy land, was injurious. He had a large quantity of land with a loose, sandy subsoil, and he believed that the quicker it was planted after being plowed, the better. But not so with lands having a hard subsoil, which will not let the water down, and which may bring up vegetable substances beneficial to plants.

Col. FAULKNER, of Acton, said the depth of plowing should depend on the nature of the soil. He cultivated eleven acres of land, which is unusually infested with rocks and stones, so much so that he almost despaired of reclaiming it. On the produce of this amount of land he keeps ten cows, a yoke of oxen, and two horses, besides selling two to five tons of hay annually. His mode of cultivation is this. The land is plowed as deep as possible. In May he plants with potatoes, and after removing the crop in the fall plows again. In May of the next year it is plowed and harrowed twice, and then sowed with millet, which yields a crop equal to a ton and a half of hay. About the middle of August manure is spread over the stubble left by the millet, the land plowed and harrowed twice, and sowed down with timothy and red-top alone. Not less than sixty loads of manure are applied to the acre, and the land lasts seven years, generally yielding two to three tons of hay to the acre.

Mr. F. said he could raise much better potatoes by using plaster and salt, mixed together, and none of them had decayed since he tried it.

Mr. SMALL, of Truro, said he plowed his corn land about five inches deep. It would not answer to plow deeper, on account of a want of manure to vitalize the dead earth brought up by plowing deep. But if there was no lack of manure, it was no matter how deep land was plowed. On the Cape,

they always found they could raise good corn when they could bring their land over to a sward. Neat cattle he considered the best means of accomplishing this, for after they take the feed off the grass, there is nothing so beneficial to the land as the manure, both solid and liquid, which they leave upon it.

Mr. SPRAGUE thought farmers were generally in too much haste to get their seed into the ground, and did not take sufficient pains to get the soil permeable, and in proper condition.

Mr. SHELTON asked leave to make some remarks on the subject discussed at the last meeting, viz., the importance of agriculture to the well-being of the State as compared with any or all other interests. He illustrated his views by comparing the different professions, as farmers, mechanics, &c., to a tree, of which the farmer formed the trunk, the other classes the branches, and the laboring men who serve them all, the roots. He illustrated at some length the results of a separation of the various classes of society, and the absolute necessity of mutual assistance and dependence.

Mr. SHELTON then went on to remark that much was said about protecting the farmer, that the government had done nothing for him, &c. In his view, the protection the farmer needs, is good free schools, that they may feel when they are grown up that they need not be ashamed to get up at these meetings, and speak in vindication of their own cause. He believed that every manufactory started, and every mechanical pursuit opened, afforded protection to the farmer.

Some pertinent remarks in relation to the pulverizing of soils were made by Rev. Mr. TRASK, of Fitchburg, and at 9 o'clock the meeting adjourned.

For the New England Farmer.

CARROTS FOR HORSES.

FRIEND BROWN:—Do you recommend the feeding of carrots to horses on the same score that you do to cows? I know that the opinion obtains in many sections that they are paramount to almost any other kind of grain. Yet this practice has to my knowledge been attended with very serious results. Mr. Holbrook has often recorded his views with regard to the carrot—its culture, and that for which it was best adapted, but if I mistake not, he has never introduced the horse in this connexion.

R. H. H.

REMARKS.—We have used carrots for horses with the best results, for years, and believe them to be excellent feed for any stock.

TO KILL LICE ON CATTLE.—H. MUDGE, in the *Prairie Farmer*, says that a small quantity of dry slacked lime rubbed into the hair of cattle will destroy all lice. If a remedy it is a cheap and easy one.

For the New England Farmer.

NEW ENGLAND FARMER.

Since the establishment of this paper, by Mr. Cole, I have been a constant reader of it, first in its book form, and latterly as a weekly paper. A few days since, I concluded to take the monthly, as the files of the weekly, which I have carefully preserved, are much less convenient for reference. Well, the January number, after having been stitched into a cover and the leaves cut, now lies before me, having been looking it over.

By what can the progress of the world be more strikingly illustrated than by this same *New England Farmer*? In 1274, less than six hundred years ago, a single copy of the Bible cost about \$160, although the standard of value was so different then from that of our times, that the ordinary price for a day's work by a common laborer, was three cents,—that of a bushel of wheat ten cents; so that a Bible was equal in value to about 300 barrels of flour! And only about 400 years ago, a man in England gave a load of hay for a single leaf of St. James' Epistle. So say the records. Now, in 1853, half a bushel of wheat will pay for twelve numbers of the *Farmer*, each containing reading matter equal to a volume of some 135 pages of ordinary book printing. A single pound of butter will buy four times as much reading matter in Boston, A. D. 1853, as the whole yearly salary of the king's physician would, in London, A. D. 1359. Yet some people who really would be glad of the *Farmer* can't afford to take it!

But these reflections are carrying me away from my purpose, which was to take a bird's-eye view of the January *Farmer*, the first number of the monthly I have seen since the weekly was commenced. Here then it is. Hold it up. "*New England Farmer*,"—something patriotic and venerable in the very name. A pretty frontispiece,—a farmer casting seed upon the well-plowed field, surrounded by his flocks and herds, implements, sheaves, fruit, poultry, bee-hive and farm-buildings, while in the distance the steeple of the meeting-house, where he publicly worships God, and the dim outlines of the school-house are seen, resting against the dark form of the "everlasting hills." Then follow names of proprietors and editors. What a trio occupy the editorial "chair," representatives of three States. The farm of the principal editor lies in a town that was visited by a party of "Good old English Gentlemen," who strolled into that neighborhood on the 19th of April, 1775, but who took so little fancy to the agricultural advantages of the section, that they did not stop long enough to make a very thorough analysis of the soil. One of the assistant editors is experimenting upon the soil of the Green Mountain State, the other upon that of the Granite State. Let us now look a little closer at the result of their labors, as exhibited in the sheet before us. We will take up the articles successively.

"*The New Year*."—Reflections on the past, suggestions for the future.

"*A Valuable Book for Reference*."—Eight characteristics of the monthly *Farmer*.

"*Great Yield of Carrots*," in Wendell, cultivated by Mr. Cook. Clear profit of \$100 on three-fourths of an acre. Detailing particulars of state of land, mode of tillage, price of crop, &c. Information well worth a ride of a half-day for any

farmer to obtain, who don't hold to "Books." By the way, Mr. Cook, why not charge manure! Out here it is worth \$7 per cord.

"*The Season*."—Comparing the present with the last. Very acceptable facts, as every body talks of the weather.

"*The Use of Guano*."—Information in relation to its use in Virginia, by one who had tried the article on worn-out lands in that State. The same information might have been given to each one of your many thousand subscribers, by letter!

"*Profit of Fowls*."—An apparently honest account for two years with some 75 biddies, showing a profit of about 50 cents a year on each hen. Every body likes to read such accounts; very few have patience to make them.

"*A Remedy for Bots in Horses*."—Don't sound quackish at all.

"*Advantages of Warm Weather*."—Estimate to show that two and a half millions of dollars will be saved in fodder alone by the mild winter, in New Hampshire. Is not the "wind tempered to the shorn lamb?"

"*Peculiar Difficulties of New England Farming*."—Want of system, skill, education, capital, &c., discussed. Comments on some Yankee habits,—going West, to California, turning preacher, doctor, Member of Congress or shoemaker! A spicy article. But are not some of the best homes in the land enjoyed by shoe-making farmers of Massachusetts?

"*Harvest Hymn*."—Alas, how many of us need to alter the last two lines, thus:

The incense of a grumbling heart,
Is all that we do bring.

"*Lyceum Lectures*."—Endorsing the proposition of the State Board to employ lecturers on Agriculture. Can't help saying I have little faith in this project. This lecturing, is it not an attempt to build a sort of "royal road to knowledge." They have to dig for gold in California; so must we dig for knowledge. That's the price, and it cannot be bought any cheaper. But lectures may stir the waters and open the way for something better.

"*Two Acres*."—Grand good hints to those of us who have so much land that we are too poor to cultivate any of it properly. Almost persuaded to sell a part of mine first chance, and then see if I can't do something worth while on what is left.

"*Red Russet*."—Its history and character, with a fine picture of its fruit. When some people get hold of a kind of fruit, or any other thing that sells well, they feel inclined to keep the secret to themselves. Not so the correspondents and editors of the *Farmer*.

"*The Season of 1852 at Wilmington and Vicinity*."—By Silas Brown. Everything from his pen is "twenty-four carets fine."

"*State Board of Agriculture*."—Proceedings, Dec. 1, 1852.

"*Vegetation in California*."—Lots of tough stories. To think of eating onions, like apples, when they weigh twenty-one pounds apiece, almost brings tears to one's eyes, without looking at spruce trees 360 feet high, or solid cabbages seven feet in circumference! Yet Mr. Shelton tells of many such things.

"*Crops in Canada*," "Whittier's Corn Song," "A Siberian Winter," are short, pithy articles.

"*Winter Lectures*."—A suggestion to substitute practical men for professional lecturers consid-

ered, and a sort of tea-party or pic-nic of half an hour or so, recommended to precede the lectures, by which the sharp corners of unsociability may be rubbed off. Pity 'tis laboring men cannot be induced to try their hand in literary efforts oftener than they do. The preparation of one address would do any of us more good than the mere listening to a dozen much better ones, by others.

"*Sound Maxims in Farming.*"—Old hints here, to new reformers in our line.

"*Susceptibility of Animals to Atmospheric Influence.*"—Curious facts stated on this subject. Some of them, at least, familiar to the weatherwise.

"*Gathering and Preserving Winter Fruit.*"—One of those practical articles, which I value just as highly in print, as I should if the words fell from the lips of the fruit-grower, himself. My own experience corroborates the principle that "warmth occasions rapid decay;" but how shall a warm cellar be made cool?

"*Lime, Guano, Bone-dust.*"—"Lime in agriculture." Scientific facts and suggestions. Interesting for farmers' use, or ought to be, inquiring what they shall do to improve the soil.

"*Warts on Plum Trees.*"—Inquiry for a remedy—none found.

"*The Way Russians Treat their Horses.*"—An article that should be read by all rough, profane Yankee teamsters, till they are ashamed of the treatment this noble animal receives at the hands of some of them.

"*Honey Bees.*"—Facts about these patterns of industry—such as, that bees *secrete* honey, as cows do milk, not *cull* or *gather* it, as people suppose they do, from flowers.

"*Raising and Selling Milk.*"—The dark side of the business, by a Westboro' man, who seconds the motion for a Milk Convention.

"*House Plants.*"—Girls, this is for you.

"*Plowing Orchards.*"—This article certainly "plows" a deep furrow into the prevailing notions on the subject, and reverses Mr. Cole's teachings. Hope we shall not have to change our practices in agriculture, as often as ladies do their taste in bonnets. Still we like to hear all sides. Was it not the "pruning closely"—words that make me shudder—and not the "plowing often," that caused the disease?

"*Apples.*"—Cautions as to new varieties, and remarks on certain qualifications essential to first rate fruit.

"*Great Yield.*"

"*United States Agricultural Society.*"—First meeting, character and objects.

"*Inventory of New Hampshire,*" "*A Beautiful Art,*" and the *Last Rose of Summer*, bring us to the

"*Bull—Earl of Seaham,*" who occupies the last page of the first half of the January *Farmer*. And here I must stop,—with my design of reviewing the whole number, half accomplished; although I have expended twice the labor that I thought the whole would require. Just look at the articles enumerated—practical, scientific, humane,—yet they constitute but the one-twenty-fourth part of a whole volume, i. e., four cents worth.

And here I wish to make a remark or two upon the weekly *Farmer*, in which the agricultural matter occupies about one of its four pages. First, as to the liberality of the publishers. Most publishers of weekly papers think it all they can afford,

to pay one editor. If it is a religious paper, and edited perhaps by a clergyman, whose hands are full of professional duties, he is required not only to write and select the matter of a religious character, but also, to "keep the run" of secular affairs, from the "doings in Congress," to the latest railroad "accident." The same is the case with political, literary and agricultural papers generally. No wonder he fails in some one or more points, when so many things are attempted by one man. The agricultural editor has other duties than those of his editorial sanctum. He should attend agricultural meetings, fairs, cattle shows, &c., &c. Not only this, he ought to go among the farmers, visit them in their fields, houses and barns; beside managing his own farm. Without meddling with the miscellaneous department of the paper, he has plenty to do. Who then shall attend to that! the boys in the printing office?

Messrs. RAYNOLDS & NOYES think not. They hire a man for this purpose. And may the investment be as profitable to them as it is advantageous to their readers. The weekly *Farmer*, as to miscellaneous reading, condensed, yet comprehensive news items, I regard as a model paper. Here, there is a place for every thing, and every thing is always in its place. But the amount of labor, research, and tact necessary to keep them so, week after week, is, I apprehend, generally underrated. The labor of an author—one who "makes pieces out of his own head"—is far better appreciated than that of one who strips facts, thoughts and incidents of their unnecessary verbiage, or clothes them in simple attire and arranges them in order for reading or reference. Yet, to the success of a public journal, the faithful performance of the duties of the mere editor is not less important than those of the author.

With such journals, to collect the results of the practices of the best farmers, and the suggestions of the most learned and scientific men in the land,—with most of our highest Universities open to all, for such partial course, if desired, as shall enable students to pursue any branch that may be thought to have particular bearing upon their occupations, is there need of changing the New England system of common education, to that partial system which would establish one college for the farmer, another for the merchant, and so on?

Winchester, Jan., 1853.

S. F.

For the New England Farmer.

THORN AND QUINCE STOCKS FOR PEARS.

"Is the thorn as good as the quince to graft the pear into?" No. You ask why; I will give some reasons why I think they are not so good. The thorn when taken from the woods has but very few fibrous roots, and I have found that they were very slow to throw out roots in the nursery; I have transplanted and after two years grafted them, and the scions would grow very well the first year, and some the second, but die the third; I have pulled up those that have thus died, and found that they had no more fibrous roots than when I set them out. Of quite a lot that I have tried, I have not got one left. They are as liable to be attacked by the borer as the quince, and it is almost impossible to find them in this vicinity free from this nuisance. I have known cases where

the pear has been worked on the thorn with success; I have also known the quince worked on the thorn six or eight feet high, but this is no advantage.

The quince, it is well known, has a great many small roots, and will live and flourish where not one in ten of the thorns will live. Quince stocks come cheap, and would prove cheaper in the end than the thorns if they could be had free of expense. My advice is, for dwarfs, try quince stocks instead of thorn.

J. F. C. H.

Newton Centre, Feb. 1st, 1853.

REMARKS.—This advice is from a practical nurseryman, who speaks what he knows.

A MILD WINTER.

Up to the 12th of February there had been no sleighing in this vicinity with the exception of a few days in Boston and its immediate neighborhood. *Pansies*, or *Heart's Ease*, have been in blossom throughout the winter, in our garden at Concord, but without the delicate perfume which they give out in the summer.

Farmers have been enabled to perform various kinds of labor which will considerably facilitate their spring work, so that if the April weather is favorable we may look for an unusual amount of sowing and planting for the coming season.

Plowing was going on as we passed through New Jersey last week on our return from Washington; and the *peach trees* were in blossom on the eleventh February at Baltimore.

The air to-day, (the 12th) is as soft as the first of May; overcoats hang on their pegs, and windows are open on the sunny sides of houses.

As the sun is up earlier and remains longer, the prospects of the ice-dealers grow fainter for a crop of that pellucid article.

The roads are heavy, and locomotion slow off of the rails, while the skaters and sleigh-riders do not sing praises of such weather half as cheerily as do those who find it a little difficult to get coppers to purchase coals.

The prognostications of the almanacks have not all failed. The old *Farmer's Almanack* has hit it to a T. Of the days 9, 10, 11 and 12, it says—“*Quite mild for February.*” Who can doubt its infallibility hereafter! Success to the Old Farmer's Almanack; and don't forget it in haying time!

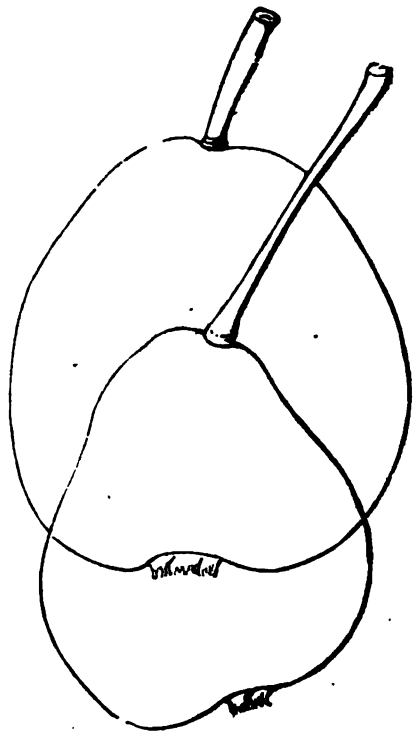
A SPLENDID PEAR.—At the room of Col. WILDER, 1 Pearl Street, we saw the other day a specimen of the *Belle Angevine Pear*, grown with eleven others on the same tree at St. Germain, France, which weighed when green *thirty-four ounces*! Its height was eight inches, and circumference fifteen. It was purchased and presented Mr. Wilder by GEO. D. PARRISH, Esq., of Philadelphia. It was preserved in alcohol, and in perfect condition.

BLOODGOOD AND ROSTITZER PEARS.

The Bloodgood is a very highly-flavored pear, and deserves a place in every garden among the early fruits. It was brought into notice about the year 1835, by JAMES BLOODGOOD, a nurseryman, at Flushing, Long Island. The sort was brought to that nursery as a new variety, without a name, and Mr. B. was never able to trace its history further. The tree is rather short jointed, with deep reddish brown wood, grows moderately fast, and bears early and regularly. The fruit, like that of all early pears, is better if ripened in the house.

It surpasses, says Downing, every European variety of the same season, and together with the Dearborn's Seedling, another native sort, will supplant in all our gardens the Jargonelle, and all inferior early pears.

Fruit of medium size, turbinate to obovate.—Skin yellow, sprinkled with russet dots, giving it a russety look on one side. Calyx strong and open, scarcely depressed. Flesh yellowish white, buttery and melting, with a rich, sugary, highly aromatic flavor. Ripe from the 25th of July to the 10th of August.



The ROSTITZER, which is the smaller outline, is supposed to be a German pear, and is likely to prove a capital variety. It bears abundantly.

Fruit of medium size, oblong-pyriform. Skin a dull yellowish green, with a reddish brown cheek, and whitish dots, light russet. Stalk very long,

nearly two inches, irregular, slender, set with very little depression. Calyx open, but little sunk.—Flesh juicy, a little coarse, but very melting, sweet and delicious, with a rich perfume. Ripe August and September.

AT HOME AGAIN.

On returning from our late attendance upon the first annual meeting of the United States Agricultural Society, at Washington, we find an accumulation of communications, inquiries, new books, papers, &c., upon our desk which could not all be noticed in the brief space of a week, but which shall receive respectful attention at an early moment. We beg leave to utter new expressions of thankfulness for these favors—these sure indications of progress and improvement among the thousands of our readers.

Our last year's volume was increased some one hundred and sixty pages to make room for the contributions of our friends. But this increased space will not sufficiently accommodate their increased activity of mind. The occupation has now a literature; farmers have broken down the partition walls that long separated them from the world of letters. With their new modes of culture they have found new modes of expression, and are constantly furnishing the agricultural press with clear, and comprehensive statements of their operations. Such contributions are already giving tone and character to these publications, and will prove of essential benefit to every inquirer in the art.

Our visit at the metropolis was a pleasant one. Its direct object being accomplished, a few days were devoted to friendly interchanges among old and dear friends, and in conversation with gentlemen from various parts of the Union. One day was most agreeably spent on the plantation of Mr. CALVERT, in Maryland, in looking at his one hundred milch cows, his new and unique barn and sheds, and other matters of interest. These may form topics of remark hereafter. In returning, a day which will long be remembered, was passed in a visit to the Caloric ship *Ericsson*—that beautiful structure, and wonderful embodiment of man's genius. We went among the depths of her machinery, examining the finish and nice adjustment of its parts, and kindled with enthusiasm as we believed that upon bidding she *must* "walk the water like a thing of life." An hour or two at the "literary emporium" of the *HARPER's* closed the day.

Now, again at our post, not only your written favors, but your faces, kind readers, we shall be glad to see. The interest in which we are engaged is a common one, and each must "magnify his office" as best he may.

TO KILL LICE ON SWINE.—The *N. Y. Agricultor* says that sour, warm buttermilk, well salted, and

rubbed upon the backs of swine, will destroy all the vermin there.

REMEDY FOR CHOKED CATTLE.

We were not aware, until quite recently, that there is an annual loss by the choking of cattle which amounts to a very serious item in the commonwealth. On mentioning the subject lately, a gentleman informed us of several instances of quite recent occurrence, some of which proved fatal.

Having a cow in the habit of getting choked, we found it necessary to find some ready way of relieving her, or else to see her die. The plan described below is easy and sure. At any rate, we have known a woman "unchoke a cow," repeatedly, alone, with these implements.

Take a round stick, fifteen inches long, and two or two and a half inches in diameter, and bore an inch hole through the centre, as shown in Fig. 2 at *b*; take a common broom handle and pass its upper end through the hole at *b*, in the stick, Fig. 2, and draw it along to the lower end, at letter *a*. The end of the stick at *a*, must be wound with cotton cloth to make a bunch about two and a half inches through, and the cloth nailed on so as to prevent all possibility of its slipping off,—then cover the cloth with lard, so as to make it slip easy. Now place the stick, Fig. 2, across the cow's mouth, and fasten it with strings or straps about the roots of the horns, then gently press the stick, or probang, down the throat, and the work is done!

These articles may be fitted ready for use in half an hour, and should always be in readiness. After having them by us for several years, we find that the practice is an old English one, and the same operation is described in some of the English books.

For the New England Farmer.

A RARE BROOD.

MR. EDITOR:—I have been interested in the accounts published in your paper, relating to Fowls, their treatment, profit of keeping, &c. I have a few of several varieties, but having lately commenced farming, have no results to offer as yet. A fact, however, has come under my observation, which I think may not be uninteresting. A neighbor of mine has a hen which hatched last spring,



Fig. 1.
Cattle Probang.



Fig. 2.

in one brood, twenty-nine (29) chickens, all of which she raised during the past season. She is large, and I should judge a native, with a cross of the Cochin China or some other large breed. *Sheldon, Vt., Jan., 1853.* Novice.

LEGISLATIVE AGRICULTURAL MEETINGS.

FIFTH MEETING—TUESDAY EVENING, FEB. 15, 1853.

The fifth meeting of the series was held on Tuesday evening, at the State House.

The meeting was called to order at quarter past 7 o'clock by Mr. PROCTOR, of Danvers, and Hon. AMASA WALKER was called upon to preside.

Upon taking the chair, Mr. Walker announced the subject for the evening's discussion, as follows—

"The comparative value and profit in the cultivation of grass, grain, and vegetables, as farm products."

In opening the discussion, the chairman remarked that he was very unexpectedly called upon to preside, and was entirely unprepared to speak on the topic of the evening. He observed, however, that the agriculture of Massachusetts had entirely changed within the last twenty-five years, in that the opening of railroads, affording rapid communication from all parts of the country, with Boston, the great market of the State, had given a new value to different articles of farm production. We now have to compete with the West, with which we are in direct connection. By next fall, cattle, and almost all agricultural products, will be brought here from the Western Reserve, in Ohio, whereas twenty-five years ago we had a market which was essentially our own. From this change of circumstances, of course our farming must change also, and we must turn our attention to the cultivation of those crops in which we can compete successfully with those sections of the country which share our markets with us. And in doing this, reference must especially be had to the cost of transportation entailed upon these foreign productions, for in the ratio of this expense is the extent of our protection, and advantage over the foreign producer. As for instance the expense on certain articles in proportion to their value,—the greater the expense on this value of course the more chance we have of profitable competition. Are there not some products which we can get sooner to market than our competitors, and also some perishable ones which cannot be profitably transported long distances? In deciding what articles to raise, much depends upon the judgment and circumstances of the farmer.

Mr. PROCTOR, of Danvers, said he would not recommend the exclusive application of the lands of a farm to either grass, grain, or vegetables, because each is in a measure useful. He then proceeded to institute a comparison of the relative va-

lue of those crops, first taking up that of grass, grown for the making of hay, and this because the grass grown in pastures is more of a natural production. He thought it could not be doubted, however, that our pastures might be greatly benefited by proper attention and renovation. The main objects which the farmer has in view are to secure the means of feeding their stock, and their families, and to produce something which will supply them with cash. As a general thing the hay crop on well conducted farms does not much exceed one ton to the acre, and lands devoted to it cannot be estimated to yield more than \$20 net income to the acre, with a very moderate allowance for the necessary fertilizing agents. Of the grain crops, Indian corn, all things considered, is the most valuable. The average of this crop throughout the State does not exceed 40 bushels to the acre, though on lands fairly manured and in good condition, 50 bushels would be a fair crop. But the general value of corn cannot be stated higher than \$40 per acre; and allowing \$20 for extra manure and labor, the net income of any kind of grain lands will not exceed \$20 per acre. Of root crops, carrots, beets, and turnips, are the most profitable for feeding stock. Carrots require much care in preparing the soil, but yield abundantly. From 12 to 20 tons to the acre are frequently raised, and they are valued by men of experience at half the worth of English hay for horses and neat stock.

Mr. Proctor had no doubt that lands properly managed would yield double the value in carrots that they would in grass or grain, and the same is true to a certain extent of beets, turnips and parsnips. He believed carrots to be the most valuable crop the farmer could raise; but they can be grown only on good soil, with thorough tillage and liberal manuring. The land should be plowed at least nine to twelve inches in depth, well pulverized, and sown in rows 14, 16, or 18 inches apart. They can be cultivated with less uncertainty than any other crop, and the speaker knew of no insect that operates to destroy them. Estimating 16 tons as a fair crop, at \$8 per ton they would yield \$128; and deducting \$68 from this for extra labor and manure, it leaves a net profit of \$60 per acre,—more than double that of grain or grass crops.

Beets, perhaps, would be nearly as profitable as carrots, and they are quite as favorable for cattle; but they cannot be grown for several successive years on the same soil, and leave it in good condition. At the end of two years some rotative crop is necessary, and no crop will grow advantageously after them. With carrots there are some crops that will grow better after them—onions, for instance. He had known a crop worth \$200 per acre to be raised on land which had been used for carrots.

Mr. SMITH, Senator from Hampshire County,

said that in his section of the State the crops raised were those best adapted to stock feeding, as they were not located near enough to markets that would give them good prices. Hence they chose such crops as would most benefit their lands, and looked to their stock for their income. Root crops were but very little cultivated. Broom corn is cultivated with great success; it affords a good deal of feed for cattle. Many have gone into the cultivation of tobacco; it requires double the manure of ordinary crops. The general average of corn is about 40 bushels, though sometimes, on particular pieces of land 60 to 80 bushels are raised. His system of cultivation was a rotation of crops, plowing up green sward, putting on ten or twelve loads of manure, and getting therefrom 60 bushels of corn to the acre; then plant in September with rye and get 30 bushels; and then sow it down and get 2 tons of hay—all by one dressing of manure. In reply to an inquiry, as to whether broom corn can be grown 12 or 14 years in succession without exhausting the soil, Mr. Smith stated that he did not think it did; he had a piece of land he had planted with it for 30 years. The cost per acre of raising tobacco he stated to be about four times as much as that of Indian corn. He also stated in reply to inquiry that he considered his thirtieth crop of broom corn from the same land as good as the first. It averages 600 to 700 lbs. of "brush" to the acre, and is worth $3\frac{1}{2}$ to 12 cents per hundred; 6 cents is a fair price. From a well matured crop, 10 bushels of seed can be obtained from a hundred weight; and it is as good for feeding out as oats.

Mr. ROWLEY, of Egremont, said the farmers of the southern part of Berkshire were turning their attention considerably to grass crops, and from having no market near at hand, their products were fed on the farm. Much attention was paid to the improvement of grass lands by manuring and underdraining, which latter operation it was considered caused an increase of one quarter in the yield of clayey, wet lands; \$10 is the average market price for hay in his locality. Of grain crops, corn is considered the staple production, and more of it is raised than of any other crop. The average yield is 50 bushels. The corn is cut in September and stacked. He considered an acre of corn fodder equal to an acre of grass. Wheat, for the last two seasons, had been cultivated with great success. Mr. Rowley stated that a neighbor of his had gathered from a field of 15 acres 282 bushels by measurement, and 313 by weight, it weighing 64 lbs. to the bushel. This, however, is more than an average. If put down at 20 bushels to the acre, at \$1.25 per bushel, and corn at 40 bushels, at 62 $\frac{1}{2}$ cents, we find that each amount to \$25—while in addition to the corn we have the fodder. The cost of seed for corn 25 cents, of wheat \$3, per acre, and then a little addition for liming the wheat, to

be reckoned with which is the straw. He considered the corn crop the most profitable. It is best adapted of any kind of grain for feeding. Mr. Rowley stated the system in his locality to be thus—"We mow the most of our lands,—all that we can—we crop the rest, and fill our yards with stock from the West—cattle, sheep, horses, &c., and then we feed our grain during the winter season. Living nearer New York, Brighton and Boston, we have the advantage over the western country. With daily communication we can ascertain the condition of the market, and we can run our products quicker than they can."

The speaker stated that he had had but little experience in root crops; they failed him entirely last season in consequence of the drought. He related an instance of extraordinary yield in carrots in the town of Monterey, which came before the County Agricultural Society. It was judged by the committee that the yield would reach 1800 bushels to the acre. The soil was cold, clayey, and wet.

He stated in explanation that the estimate was based upon a measurement made about the 20th of September by the committee. One row was dug as a part of a rod, to reckon from, and that row measured at the rate of over a thousand bushels to the acre. This was after a severe drought, and as the fall rains were then coming on, the committee were of opinion that the crop would double before it was gathered. No accurate measurement had been rendered to the committee. The speaker stated in conclusion that he believed that 50 per cent. of the actual profits of farming in southern Berkshire, came directly or indirectly from raising Indian corn.

Mr. WALKER inquired of the last speaker the cost of bringing corn from Chicago.

Mr. ROWLEY replied that he could not tell; but the millers of Berkshire furnished western corn for about 60 cents.

Col. FAULKNER, of Acton, said he had paid 50 cents a bushel on wheat from Chicago. Col. F. also desired information in regard to the use of guano as a manure, and in some remarks on the subject gave it as his opinion that many farmers spread their manure over too much ground. He incidentally stated that the value of the milk brought over the Fitchburg railroad into Boston the past year, at 4 1-2 cents per quart, was \$146,560.20.

Mr. HOWARD, of Boston, said that in using plaster with guano, the former should be in a state of solution, in order to retain the ammonia of the guano. If dry, a combination of the sulphuric acid with it would not take place and the ammonia would evaporate. It takes a large quantity of water—70 to 1—to render plaster sufficiently soluble to form available combination with the guano.

Mr. PROCTOR moved that the following be the

subject for discussion next Tuesday evening, in lieu of the subject in order for that evening:

"The expediency of establishing in the several counties of the State, FARMERS' INSTITUTES, and the most useful form of such organization."

Mr. PROCTOR explained that the object was to establish something similar to the Teachers' Institutes now existing under the Board of Education. The subject is now pending before the Board of Agriculture, and was suggested by President Hitchcock, who, it was probable, might be present and address the meeting next Tuesday evening. The motion was carried, and at 9 o'clock the meeting adjourned.

For the New England Farmer.

A FEW REMARKS ON RAISING CELERY.

MR. EDITOR:—I saw an article on celery in the last number of the *Farmer* for January, with which I cannot fully agree, though in most respects good and true. Your correspondent quotes from the Patent Office Report, which says: "As the plant grows, continue to earth up," &c. Now, my experience is that it should not be hoed up at all, until within four weeks of the time you intend to dig it, if early celery; if late, it requires longer, as it does not blanch so fast when the weather becomes cool. Last season I tried both ways, and the result was, that that which was earthed up at different times as the plant advanced in growth, was some of it very rusty, and all of it more or less so; while that which was not hoed up at all until within four weeks of the time I dug it, was entirely free from rust, blanched up twenty inches, and as white as snow. From these facts, as well as the testimony of others, and all previous experience, I must say, I think the practice of earthing up at different times is a very bad one; and I would advise all who have been in the habit of hoeing up as recommended by your correspondent, to try the plan I have recommended above, and I am satisfied they never will return to the other.

J. P. C. H.

Newton Centre, Jan. 1, 1853.

For the New England Farmer.

A NEW APPLE.

GENTS:—I send you by bearer, a few apples of a variety which my father has growing upon his farm, and for which he knows no name. I would like to have you try them, and tell me if they are a variety which are grown to any extent in the N. E. States. I do not know of any like them except in this place. The tree is a good grower and an excellent bearer in even years. The fruit is uniform in size and color, will keep as well as a Baldwin, and is preferred to Baldwins by all who have eaten them. I sold the fruit this year higher than other fruit. I ought to have sent the apples before this; they are a little past the prime.

Respectfully yours, ADDISON RICHARDSON.

East Medway, Feb., 1853.

REMARKS.—This apple has been kept a little too long, but is a good one still. It has a striking

similarity to the *Red Gilliflower*, but does not agree in all particulars sufficiently for us to pronounce it identical. It is a much better apple than many now under cultivation. We know of no fruit like it.

EXTRACTS AND REPLIES.

MR. SAMUEL BLODGET, Acworth, N. H., has an apple of six years' growth. Three inches from the ground it is 13 1-2 inches in circumference; and 5 inches from the ground 10 1-2; 15 feet and 7 inches in height. Bore the 6th year five and a half pecks of apples; the tree bears common fruit, and has had no cultivation.

LARGE HOGS.—MR. JOSEPH P. GOULD, of Middleton, slaughtered a hog on the 27th Jan. which was but 20 months old, and weighed 651 pounds.

MESSRS. BLOOD & BENT, of Faneuil Hall Market, have just received of Mr. JOSEPH JAMESON, of Southboro', 4 hogs which weighed, respectively, 723, 607, 513, and 506 pounds! Also, from Mr. JONAS CUTTER, of Weston, two hogs which weighed 567 pounds each!

TO J. K., Bradford, Vt.—There can be hardly a question but that guano will materially increase your corn crops on the interval lands you mention, if you apply it during a gentle rain, or in such a manner as that it shall not give off its fertilizing properties. If you sow it broadcast let it be during a moist day; if you put it in the hill, mix with five parts of moist loam, on the morning of the day in which you intend to apply it, thoroughly pulverizing the lumps of guano and incorporate them with the loam. On a portion of the guanoed land, make some experiments with ashes, salt, lime and plaster, and note the results. Say a few rods only of each. On a few rods apply ashes, on a few, salt, and so on. It will be clear to you, we think, on reflection, that your land abounds now in vegetable matter, but that by long cropping, and no manuring, the mineral properties are expended.

FRIEND BROWN:—Dear Sir,—Can you or any body else, tell us how to make hard water soft if you can you will oblige a subscriber.

There is a New Hampshire girl in New York City, who has been offered \$20 per week to go to London and learn the girls how to use the sewing machine, and her expenses in a steamer going and coming all borne—God bless her. D. S.

Lebanon, 1853.

From two to four ounces of sal soda dissolved in a barrel of water is usually sufficient to soften it. This is a very cheap salt, and is one of the principal articles used in making the famous washing fluid so much in use at present, and sold at the shops at from 20 to 50 cents a gallon.

L. H., Burlington, Vt., describes a steer raised and owned by JACOB PERKINS, of that town. At one day old, it weighed 124 1-2 lbs.; at 30 months,

737 lbs. ; and at four years old, 3,135 lbs. It is not been fatted, although its girth is 9 feet and inches !

LIME IN AGRICULTURE.

Mr. Nesbit, principal of the Agricultural and chemical College, Kensington, England, in a lecture on the use of lime, says: "Pure limestone consists of 22 parts of carbonic acid and 28 of lime. When the limestone is heated in the furnace, the carbonic acid is driven off, and pure lime is left behind, if the limestone itself is pure. Lime, however, that is not perfectly pure, he says, is best adapted for agricultural purposes. Those varieties that have in them phosphate of lime are most valuable ; and those which contain Silica in a soluble state, sulphate of lime, and gypsum, are also valuable : for these impure limestones convey to the soil other constituents besides calcareous matter." Mr. Nesbit sums up his remarks by saying, "Lime can be used beneficially upon soils which have been little stirred, little exposed to the air, upon soils containing organic matter, upon new soils, or upon those which contain naturally or artificially a certain amount of organic matter, and upon heavy clay soils it acts best ; but if used *without manure* upon arable soils from which crop after crop has been taken, lime will not restore fertility. There is an old and true proverb,

"The use of lime without manure
Will always make the farmer poor."

As to the quantity of lime to be applied, Mr. N. was in favor of applying it in small quantities frequently, rather than in large quantities at long intervals. The application of lime to grass lands is producing very striking results, not only on mowing, but on pasture lands.

AGRICULTURAL EXHIBITIONS FOR 1853.—The following is the order of the Annual Exhibitions of the County Agricultural Societies of Massachusetts for 1853, as reported from the several societies to the State Board of Agriculture.

Worcester County Society.....	Sept. 21 and 22.
Norfolk County Society.....	Sept. 27 and 28.
Essex County Society.....	Sept. 28 and 29.
Housatonic Society.....	Sept. 28 and 29.
Worcester West Society.....	Sept. 30.
Bristol County Society.....	Oct. 4 and 5.
Middlesex County Society.....	Oct. 4 and 5.
Berkshire County Society.....	Oct. 5 and 6.
Plymouth County Society.....	Oct. 6.
Franklin County Society.....	Oct. 6 and 7.
Barnstable County Society.....	Oct. 7.
Hampden, Franklin and Hampshire do.....	Oct. 11 and 12.
Hampden County Society.....	Oct. 13 and 14.
Hampshire County Society.....	Oct. 23.

AGRICULTURAL MASS MEETING.—The people of Middlesex county propose to hold an Agricultural Mass Meeting, at Concord, early in March, to discuss the general interests of agriculture, dine together, and incite each other to a more systematic and intelligent mode of cultivating the soil. We hope this "ball will be put in motion," and followed by every county in the Commonwealth.

CLOVER SEED FOR AN ACRE.—Mr. NICHOL, in the *Rural New Yorker*, thinks six pounds of clover seed sufficient for an acre.

Ladies' Department.

RECEIPTS FOR THE SICK.

SUGARED ORANGE.—Select the lightest colored oranges for this purpose, as they are more acid than the dark. Peel off the rind and slice them, latitudinally or cross-wise, about the eighth of an inch in thickness. Strew over them some powdered white sugar, in the proportion of a teaspoonful of sugar to each slice. Let them stand fifteen minutes. They are very palatable in fevers as they serve to cleanse the mouth and keep it cool.

SUGARED LEMONS, No. 1.—These may be prepared in the same manner as the sugared oranges (see above,) only they should have a tea-spoonful and a-half of sugar to each slice ; as they are more firm than oranges, they require to stand longer to become perfectly impregnated with the sugar. They are better to stand about an hour before they are to be eaten. The white skin should be carefully peeled off, as it imparts an unpleasant bitter flavor when permitted to remain long in the sugar. These are very grateful to the sick and feverish.

SUGARED LEMONS, No. 2.—Select fine large lemons. Peel off the outer skin and as much as possible of the white skin. Cut them in slices latitudinally or round the lemon, about the eighth of an inch thick. Sprinkle them with white powdered sugar, a tea-spoonful of sugar to each slice. Let them stand three hours, then strain off as much of the juice as possible from the lemons, put it in a sauce-pan over a slow fire, and as soon as the juice begins to simmer throw in the slices of lemon. Let them cook five minutes, take them out and pour the syrup over them. Should the lemons not prove sufficiently juicy to melt the sugar entirely, a little water may be added.—*National Cook Book.*

TIED DOWN AT HOME.

A friend of ours, living not far from Pontiac, was importuned one pleasant day lately, by his wife, to take her a sleigh riding. The gentleman, being a man of business, plead his engagements, when the wife replied with the old story, and that she must be tied down at home. The husband rejoined that if any person would furnish him with clothes to wear and enough to eat and drink, that he would be willing to be tied down at home.

A few days after, the gentleman came earlier than was his custom, and being fatigued, lay down upon the sofa and fell into a sound sleep. His wife took some cords and slyly tied his hands together—served his feet the same way and made him fast to the sofa. She then set a table, with all that the house afforded, and placed an extra suit of clothes within his reach. This done she started to pay a friend a visit. Upon her return late in the evening, she found her subject of domestic discipline as she left him, except that he was wide awake, and very mad.

"What on earth does all this mean?" says he.

"Nothing," quietly remarked his wife, "except the consummation of your earthly wishes—enough to eat, drink, and wear, and to be tied down at home!" That couple were seen sleigh-riding the next day.—*Detroit Advertiser.*

Boy's Department.

KINDNESS TO THE AGED.

My young friends, let me claim your kindness for the old. They are well entitled to your sympathy. Through this bright world they move mistily, and though they rise as soon as the birds begin to sing, they cannot hear the music. Their limbs are stiff, their senses dull, and that body which was once their beautiful abode and their willing servant has become a cage and a heavy clog. And they have outlived most of those dear companions with whom they once took sweet counsel.

"One world deceased, another born,
Like Noah they behold,
O'er whose white hair and furrowed brows,
Too many suns have rolled."

Make it up then as well as you can. Be eyes to the blind and feet to the lame. On their way to the sanctuary be their supporting staff, and though it may need an extra effort to convey your words into their blunted ear, make that effort;—for youth is never so beautiful as when it acts as a guardian angel or a ministering spirit to old age. And should extreme infirmity or occasional fretfulness try your patience, remember that to all intents you were once the same, and may be the same again; in second childhood as in first, the debtor of others' "patience and tenderness and magnanimity."—*Hamilton's Royal Preacher.*

ENCOURAGEMENT FOR THE LOWLY.—Gideon Lee said late in his life, "I remember when I was a lad, living with my uncle, it was my business to feed and water the cows; and many a time, long before light in the morning, I was started off in the cold and snow, without shoes, to my work, and used to think it a luxury to warm my frozen feet on the spot just before occupied by the animal I had aroused. It taught me to reflect, and to consider possibilities; and I remember asking myself, Is it not possible for me to benefit my condition?" Mr. Lee reflected to some purpose. From a poor boy he became one of the wealthiest men in New York, and Mayor of the city.

☞ The following, from the *Haverhill Gazette*, may serve to exercise the arithmetical abilities of some of our school boys. It can be done, as we have seen it demonstrated:—

A PUZZLE.—The following sum or problem was given to a boy by a gentleman who offered him \$50 if he would do it within six months, at the same time assuring him that it could be done, and there was no "trick," or "catch," about it.

Take the nine figures, digits, 1 2 3 4 5 6 7 8 9 and also the 0, and add them together so that they amount to just 100—using them all once and but once. Thus, for instance, take 7 and the 0 and they make 70, and then to the 70 add all the rest of the figures, not used in making 70. We have made 99, which is the nearest we have come to it. If any one will let us know how it is done, we will inform our readers.

☞ Dicken's *Household Words* maintains that in seventy years we have but about fifteen for labor. He deducts the remainder for sleep, eating, amusements, &c. [Editors and printers excepted.]

Advertising Department.

☞ A limited number of advertisements of an appropriate character will be inserted in the monthly Farmer at the following

RATES.

For one square of 15 lines, one insertion.....\$1.00
For each subsequent insertion.....50

☞ The above rates will be charged for all advertisements, whether longer or shorter.

Valuable Potatoes for Sale.

THE subscriber, offers the following valuable potatoes for sale. A particular description of some of them will be found in the last volume of Transactions of the N. Y. State Agricultural Society for 1851. This society awarded him a special premium at the State Fair at Utica, and also voted him \$100 at their meeting at Albany during the present month, as encouragement in these experiments.

No. 1. *Rough Purple Chitt*, imported in April, 1851, at a great expense. For yield, hardiness, and table quality it has no equal. Price \$10.00 per bushel. This potato yielded me last year, ninety-two from one by measure; while to Mr. Delafield, of Geneva, it yielded one hundred and twelve from one by weight.

No. 2. *Seedlings originated in 1849*. They are hardy, productive and good for table use. Price \$7.00 per barrel, or \$3.00 per bushel. Many of these have been tested this year under the eye of the State Society, and yielded from twenty to sixty-four from one, by weight.

No. 3. *Seedlings of 1852*. These consist of many choice kinds selected from 4200 varieties, and consisting of eleven different families. They were selected with especial reference to hardiness, fine flesh, yield and mode of growth in the hill. They afford a basis for the entire renewal of the potato crop in our country. Price \$10.00 per bushel.

No. 4. *Potato Seed from the seed-ball*. These seeds consist of two kinds,—that produced by No. 1, and the choice sort in No. 2, above,—and are the same that produced the seedlings of 1853,—No. 3, above. As they have thus been tested so they are warranted to produce a large proportion of hardy, productive and shapely tubers.

Price \$1.00 per paper, the paper to contain more than 1000 seeds, to be sent to the purchaser by mail, post paid, and accompanied with directions for cultivation.

Each parcel of tubers ordered, will be put up with cases, the different sorts kept separate, and the whole forwarded to the directions of the purchaser by express, railroad, canal, or as otherwise directed, as soon as the weather will admit, and at the expense and risk of the purchaser.

☞ Purchasers are advised to take No. 1 and 2, for immediate field crops, and No. 3, as a source of new and valuable sorts.

☞ Persons passing through Utica, are requested to call and see specimens at the store of WM. BRISTOL & CO., 108 Genesee Street, or at the residence of the subscriber near the Insane Asylum.

☞ All orders answered only for cash.

REFERENCES:—

The officers of the N. Y. State Agricultural Society.
B. P. Johnson, Cor. Sec'y of do., Albany, N. Y.
Hon. I. Delafield, Geneva, N. Y.
I. F. Fogg, Agricultural Ware House, Rochester, N. Y.
Wm. Bristol & Co., Druggists, Utica, N. Y.
Charles Tracy, Esq., New York City.
C. L. Whiting, Granville, Ohio.

C. E. GOODRICH.

Utica, N. Y., March 1.

2m

Gooseberries, Fastolf Raspberries, &c.

JOHN SAUL, Washington, D. C., offers the following for sale:

4000 Lancashire Gooseberries, comprising all the leading varieties, such as Crown Bob, Roaring Lion, Red Warrington, Champagne, Leigh's Rifeman, Parkinson's Green Laurel, Woodward's Whitesmith, &c. The plants are very vigorous and thrifty, and true to name.

4000 Fastolf Raspberries, strong canes, warranted the genuine variety.

300 Ruby Castle, or Victoria Red Currant,—the largest and best. 300 Wilmet's Large Red do.; 500 White Dutch do.; 300 Black Maples do.

☞ The above at very reasonable prices.

March, 1853.

1t

Bound Volumes.

BACK VOLUMES of the NEW ENGLAND FARMER, elegantly bound in Muslin, Gilt and Embossed, are now for sale at this office.

Farm to be Let.



That well known farm in the southerly part of West Cambridge, called the "PERRY FARM." It consists of about 100 acres, divided into orcharding, tillage and pasture, and is at present cultivated as a milk and fruit farm. The buildings, &c., are sufficient and in good order.

For terms and particulars, please apply to WM. MAPLEDEN, on the premises.
Feb. 26. 1853.

Dairy Woman Wanted.

A DAIRY WOMAN is wanted to take charge of a large dairy on Connecticut River, where butter only will be made, which must be of the very best quality for family use. Any who are qualified, having best of references, may address by mail, "Box No. 53, Windsor, Vermont," post-paid.
Feb. 26, 1853.

The Farmers' Library.

JUST RECEIVED, the following assortment of Agricultural and Horticultural Books, embracing the standard works of eminent American and European writers, on the Farm, the Orchard, the Garden, &c. &c.

	PRICE.
American Farm Book, by Allen,	\$1.00
Farmer's Treasury, by Faulkner and Smith,	.75
Dana's Muck Manual,	1.00
Prize Essay on Manures, by Dana,	.25
American Muck Book, by Browne,	1.00
Lectures on Practical Agriculture, by Johnstone,	.75
Elements of Scientific Agriculture, by Norton,	.50
Principles of Agriculture, by Thayer,	2.50
Practical Agriculture, by Johnstone,	.75
Agriculture for Schools, by Blake,	1.00
Catechism of Agriculture and Chemistry, by Johnstone and Norton,	.25
American Agriculturist, by Allen,	1.00
Liebig's Complete Work on Chemistry,	1.00
Farmer's and Emigrant's Hand Book, by Marshall,	.75
Home for all, by Fowler,	.50
Book of the Farm, by Stephens and Skinner,	4.00
Cottage and Farm Houses, by Downing,	2.00
Downing's Country Houses,	4.00
Rural Architecture, by Allen,	1.25
Downing's Landscape Gardening and Rural Architecture,	3.50
Downing's Cottage Residences,	2.00
Fruit Garden, by Barry,	1.25
Complete Gardener and Farmer, by Fessenden,	1.25
Bridgeman's Gardener's Assistant,	2.00
Bridgeman's Kitchen Gardener's Instructor,	.50
American Fruit Culturist, by Thomas,	1.00
Gardener and Complete Florist,	.25
Florist's Guide, by Bridgeman,	.50
New England Fruit Book, by Ives,	.50
Yocatt and Martin on Cattle, by Stevens,	1.25
Rose Culturist,	.25
Johnson's Gardener's Dictionary, by Landreth,	1.50
Rural Economy, by Bousingsault,	1.00
American Rose Culturist,	.25
Sigelow's Plants of Boston,	1.25
Genera of Plants of the U. S., by Gray, 2 vols.	12.00
Gray's Botany,	2.00
Farnell's Chemistry,	1.00
New England Farmer, by Cole,	1.00
Ladies' Guide and Skillful Housewife, by Mrs. Abel,	.25
Hive and Honey Bee, by Richardson,	.25
Bee Keeper's Manual, by Miner,	.50
Bird Fancier, by Browne, paper 25 cents,	.50
Townley on Bees,	.50
American Poultry Yard, by Browne,	1.00
American Poultrymen's Companion, by Bement,	1.00
American Fowl Breeder, by Moore,	.25
American Herd Book, by Allen,	3.00
American Shepherd, by Morrill,	1.00
Domestic Animals, by Allen,	.75
Diseases of Animals, by Cole,	.50
Hints to Sportsmen, by Lewis,	1.25
Dodd's Anatomy and Physiology of the Horse,	1.00
Mason's Farmer and Stud Book, by Skinner,	1.25
Management of Sheep, by Canfield,	1.00
Yocatt on the Pig,	.50
Knowlson's Complete Cow Doctor,	.25
Horse Doctor,	.25
Gesner's Treatise on Milch Cows,	.25
Treatise on Hot Houses, by Leachman,	1.00
Allen on the Grape,	1.00
Schenck's Text Book,	.50
Breck's Book of Flowers,	.75
Downing's Fruit and Fruit Trees,	1.50

For sale at the Publishers' prices by RUGGLES, Nourse & MASON & Co., Quincy Hall, (over the Market,) Boston.
Jan. 1, 1853.

Highland Nurseries, Newburgh, NEW YORK.



A. SAUL & CO., in inviting the attention of their patrons and the public in general, to their very extensive collection of FRUIT AND ORNAMENTAL TREES, SHRUBS, &c. &c., would respectfully inform them that the stock which they offer for sale the coming spring is unusually fine, both as regards quality of trees, variety of kinds, &c., &c.

The soil and climate of our Hudson Highlands have rendered proverbial the success of the trees sent from here to all parts of the union, and the accuracy and precision so indispensable in the propagation of fruit trees, for which this establishment has long been celebrated, render errors in nomenclature of rare occurrence.

They have propagated in large quantities, all the leading standard varieties, which are proved best adapted for general cultivation, especially those recommended by the American Pomological Society; as well as novelties of both native and foreign origin.

To particularize within the limits of an advertisement would be impossible; they refer to their general catalogue, a copy of which will be sent to all post-paid applicants, on enclosing a post office stamp.

The following comprises a portion of their stock, and are all of fine growth, viz:

Pears in over 400 varieties, both standards on their own stock for orchard culture, and on the Quince for Dwarf, Pyramids, and Quenoucle, for garden culture.

Apples in over 300 varieties, both standards and dwarf; also, Cherries, both standards and dwarf; Plum, Apricot, Peach Nectarines and Quince trees in every variety.

Grape Vines, (both native and foreign, for vineries;) also, Gooseberries (50 best Lancashire varieties) Ccurrants, Raspberry and Gooseberry plants of all leading and known kinds, together with Sea-kale, Asparagus and Rhubarb roots.

Ornamental Trees, Shrubs and Vines, both deciduous and evergreen, suitable for street and lawn planting, embracing all the new and rare Conifers, Weeping Trees and Shrubs of recent introduction.

Roses in every variety, including Hybrid perpetual, Hybrid Bourbon, Hybrid China, Hybrid Damask, Prairie, Bourbalet, Ayrshire, and other hardy climbing and garden varieties, as well as the more tender, Tea, China, Bengal, Bourbon, and Noisette varieties.

Herbaceous plants, a large collection of Pæonies, Phloxes Campanula, Penstemon, Eranthis, &c. &c.

Dhalls and bedding plants for the parterre and flower garden, in large quantities and variety.

Hedge Plants, 10,000 Buckthorn and Osage Orange Plants, two years growth, Arbor Vitæ for screens, &c., &c.

Dealers and planters of trees on a large scale will be dealt with on the most liberal terms.

Newburgh, Feb. 26, 1853.

2m

Norway Spruce, Silver Fir, &c.

JOHN SAUL, WASHINGTON, D. C.,



Offers the following for sale:

300,000 Norway Spruce,	4 to 6 inches.
300,000 "	" " 6 to 8 "
15,000 "	" " 9 to 12 "
8,100 "	" " 2 to 3 feet.
10,000 Silver Fir,	4 to 5 inches.
30,000 "	" " 5 to 6 "
10,000 "	" " 6 to 7 "
1,000 "	" " 12 to 18 "
1,000 "	" " 2 to 3 feet.
3,000 Larch. (European)	2 to 3 feet.

The attention of Nurserymen and Planters generally, is respectfully called to the above extensive collection, which will be sold at very low prices. Persons taking large quantities will be dealt with liberally. The whole are remarkably thrifty and fine.

March, 1853.

1m

Durham Bull.



Wanted, a pure bred DURHAM BULL, from one to two years old, of handsome form and color.

Apply at this office.
Jan. 15.

Corn Shellers.

IMPROVED YANKEE CORN SHELLERS, with and without separators. These machines are adapted to large and small varieties of corn, will shell rapidly and not liable to get out of order. For sale, wholesale and retail, over the market, by RUGGLES, Nourse & MASON & Co.
Jan. 1, 1853.

2m

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Great Offering of Real Estate.



The subscriber wishes to sell his homestead place well known as the CAT BOW FARM, consisting of five hundred acres, over two hundred of which is first quality intervals, and in a state of high cultivation, the residue is upland pasturing and wood. The farm is beautifully situated in Lancaster, the shire town of Coos County, N. H., on the banks of the Connecticut River. The location is one of the most attractive and beautiful in New England, the scenery is magnificent, both in summer and winter, and for beauty cannot be surpassed. The river at this place assumes the form of a curve, so that sixty-five acres are enclosed by nineteen rods of fence. It is but one day's ride from Boston, and is only a short distance from the Atlantic and St. Lawrence Railroad. There are two good dwelling-houses and other necessary buildings on the place. A sufficient quantity of water of excellent quality is conducted to the houses and yards from a never failing spring. He also offers for sale, a large tract of eighteen hundred acres nearly adjoining the above, mostly covered with timber and of easy access to said river. He will also sell his house known as the "WHITE MOUNTAIN HOUSE" and farm of two hundred acres, well and pleasantly situated at the White Mountains; has a good run of custom during the visiting season. This is a fine opportunity for a good and safe investment. All or part of the above property will be sold at a bargain, as the owner wishes to lessen his care. For further particulars and terms, inquire of the subscriber at Lancaster, or at this office.

JOHN H. WHITE.

Jan. 15, 1853.

3m*14

Hens, Turkeys and Geese.



The subscriber offers for sale a few pairs of the following choice breeds of poultry: White and Buff Shanghaes, Gold and Silver Spangled Poland, Bolton Gray and Black Spanish; also, Virginia Turkeys, and Bremen Geese. These fowls are of the purest blood, most of them being bred from stock recently imported, and very handsome. They will be sold low if applied for soon. For further particulars, address post-paid.

H. H. LITTLE, East Marshfield.

Feb. 19, 1853.

Scions,

SUPPLIED in large or small quantities, by JAMES HYDE & SON, N. B.—Orders should be sent as early as possible. Newton Centre, Mass., Feb. 19, 1853. 5w*2

NEW ENGLAND FARMER

Is published on the first of every month, by JOHN RAYMOND and JESSE NEWELL, at Quincy Hall, South Market St., Boston.

SIMON BROWN, Editor.

FREDERICK HOLBROOK, } Associate
HENRY F. FRENCH, } Editors.

Terms, \$1.00 per annum in advance.

All subscriptions to commence with the volume, Jan. 1. The FARMER, is devoted exclusively to Agriculture, Horticulture, and their kindred Arts and Sciences; making a neat volume of 576 octavo pages, embellished with numerous engravings. It may be elegantly bound in muslin, embossed and gilt, at 25 cts. a volume, if left at the office of publication.

Also published at the same office every Saturday, on a large handsome folio sheet, the

NEW ENGLAND FARMER, (WEEKLY.)

An Independent Agricultural Family Newspaper.

The News and Miscellaneous departments under the charge of WILLIAM SIMONDS, will include a full and careful report of the news of the Markets, and the news of the week, such as Domestic, Foreign and Marine Intelligence, Congressional and Legislative proceedings, Temperance and Religious Intelligence, and a general variety of Literary and Miscellaneous matter, adapted to family reading, comprising more useful and valuable reading matter than any other Agricultural Newspaper published in New England. Everything of a hurtful or even doubtful tendency will be carefully excluded from its columns.

Terms \$2.00 per annum in advance.

The monthly contains nearly the same matter as the Agricultural department of the weekly.

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All orders and letters should be addressed, post-paid,

RAYMONDS & NOURSE,

QUINCY HALL, SOUTH MARKET STREET, BOSTON.

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AGRICULTURAL

WAREHOUSE AND SEED STORE,

QUINCY HALL, OVER THE MARKET, BOSTON.

THE Proprietors having recently enlarged their Warehouse, and increased their works at Worcester, would respectfully invite the attention of Planters and Dealers in AGRICULTURAL & HORTICULTURAL IMPLEMENTS, GARDEN and FIELD SEEDS, &c., to their stock, comprising the largest and best assortment to be found in the United States, which are offered at low prices.

OF PLOUGHS—we have the greatest variety of kinds and sizes.

Improved Rod Ploughs, for flat furrows—Improved Scotch Ploughs for lapped furrows—Improved Stubble Ploughs, which are especially adapted to deep tillage, or varying from 6 to 12 inches in depth.

Self-sharpening, Hill Side, Sub-soil, Double Mould, Corn, Cotton and Rice Ploughs.

Cylinder Hay Cutters, Smith's Patent Lever Gate, and others. Patent Corn Shellers, with and without Separators. Seed Sowers, of various sizes and prices. Batchelder's patent Corn Planter, Improved. Fanning Mills of various sizes. Horse Powers, Threshing Machines, Thermometer Churns. Robbins' patent Centrifugal Churn, Cylinder Churn, Dash Churn, Corn Planters, together with almost every article wanted on the Plantation, Farm or Garden.

Illustrated Catalogues sent gratis on application, post paid.

RUGGLES, NOURSE, MASON & CO.

Boston and Worcester, Mass., Jan. 1, 1853. tf

Garden Seeds.

WE respectfully solicit the attention of purchasers of GARDEN SEEDS to our extensive stock, which we offer for sale. We have all the sorts of Vegetable Seeds that have proved worthy of cultivation; also, Grain, Grass and Flower Seeds. All the varieties are raised and selected expressly for our trade, and we do with confidence recommend them to all who desire to procure seeds that will prove true to their names.

Catalogues gratis, on application.

RUGGLES, NOURSE, MASON & CO.,

Jan. 1.

Over Quincy Market, Boston.

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. V.

BOSTON, APRIL, 1853.

NO. 4.

RAYNOLDS & NOURSE, PROPRIETORS.
OFFICE....QUINCY HALL.

SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F FRENCH, } EDITORS.

CALENDAR FOR APRIL.

"Spring, the year's youth, fair mother of new flowers,
New leaves, new loves, drawn by the winged hour,
Thou art returned."

April, says the author of the *Mirror of the Months*, is spring—the only spring month we possess—the most juvenile of the months, and the most feminine—the sweetest month of all the year; partly because it ushers in May, and partly for its own sake, so far as anything can be valuable without reference to anything else. It is worth two Mays, because it tells tales of May in every sigh that it breathes, and every tear that it lets fall. It is the harbinger, the herald, the promise, the prophecy, the foretaste of all the beauties that are to follow it—of all, and more—of all the delights of summer, and all the "pride, pomp, and circumstance of glorious autumn." It is fraught with beauties that no other month can bring before us, and

"It bears a glass which shows us many more."

Ah, April! April! this might have been thy character *once*, or in other climes, but we should scarcely recognize the portrait here. True, it has its flush of new green on the meadow, its crocuses, hyacinths, daffodils, and other gems of beauty; it gives us the first voice of the gentle birds, and a thousand awakenings of new life about us, but, ah, has it not its fierce winds, chilling frosts, snows and pelting storms from the eastern sky? Treacherous April! Did it not send its heralds *last* year, the robin and the bluebird, and sweet gales from the south, and ere their voice and their fragrance had died away, the fierce North resumed her sway and poured her stores of icy winds and ghilling snows into her lap. Where were the birds and the southern airs on the 7th of April, one revolution of the earth ago, when the roads were blocked with drifts, and the stone walls were ought of sight!

But then we are thankful for April, sickle as it is, and couldn't well do without it, as it affords

opportunity to make so many preparations for the busy seed-time.

PLANS.—All the general plans of the farmer must be laid out now, if it has been neglected until this time. Do not enter the field by-and-by, and wonder what crop you shall apply to this part or that, and hesitate whether you shall break up an acre or two on the hill or take another piece on the meadow. No, no, this is perplexing when the day is waning, and men and teams are waiting.

So of the garden; take the plan in your hands when you carry out your seeds. Here is the spot for the beds, their length and width all laid down; the new pear trees are to occupy that vacant and sheltered spot in the south corner; the raspberries and strawberries, the tomatoes, cucumbers and melons, the beans, peas and cabbages the early potatoes, corn, radishes and lettuce, all have their particular place assigned, and the mind is not distracted with the feeling that all must be done promptly, and yet it has not decided how to direct the operations.

Make as much garden as you can,—it is the most profitable part of the farm. There is often more profit on a quarter of an acre in garden than from 2 or 3 acres of the farm. Get in early peas and potatoes. On the sunny side of a wall, sprung up to briars and young bushes, clear up and put in seed for early potatoes; it is just such a spot as they like; the new earth so light and warm. You may have them by the 4th of July in perfection.

PRUNING.—The Messrs. ALLEN, in the *American Agriculturist* for 1842, page 65, say they think pruning should be done "after that period when the excessive flow of thin and watery sap has subsided, and the leaves have fully matured, which happens in this latitude, from the 20th of June to the 15th of July." It is worth while to try this mode and see how it works. At any rate, cut off no large limbs in April.

PRUNE TREES.—By cutting about one-half of the

last year's growth of the limbs you will prevent them from stretching off into long and slender forms, and breaking down whenever they bear.—It has the effect, also, of thinning the fruit, because it takes away a considerable portion of the blossom buds.

MOWING FIELDS.—See that the drains are all free, and gather up branches from the apple trees or brush left on meadows which have been overflowed, so that they may not be in the way in haying time.

TRANSPLANTING.—Nothing is easier if you know how—and really, it is a very simple matter to do it, and do it well.

If the tree is two years from the bud, a hole six feet in diameter is not too large; 18 inches deep will answer, throwing back the top earth into the bottom of the hole. Take the trees up with the utmost care, and break as few of the little sponge-lets as possible. How could a child suck an orange with jaws broken, and lacerated lips! In the centre of the six-foot hole raise a little conical hill and place the tree gently upon it; the roots will then fall into a somewhat natural position. Now with the fingers place them all straight, and sift in the fine, rich mould, that the delicate fibres may nestle among it.

There! you have treated that tree with proper consideration, and it will bow to you ere long, filled with luscious fruit.

PLOWING.—Plow not while the soil is wet and mixes into mortar. It will bake in lumps and remain so through the summer unless by dint of hard knocks they are broken up. Even though the season be late, it is doubtful whether any thing is gained by plowing before the ground is sufficiently dry to have it drop partially to pieces on its being turned over.

But plow deep—take hold a little lower than you did last year; an inch of yellow subsoil will soon become more than an inch of black upper soil. Remember the proverb about having “corn to sell and keep.”

GRAFTING, fencing, the nursery, clearing up the garden, the door-yard, the wood-pile, and numerous other things, will require attention now. Let us lay hold of the work before us with cheerful and hopeful hearts, and pursue it with a well-tempered zeal; the seeds shall spring upward from the sod, and He who giveth the increase shall gladden our hearts with abundant Harvest.

A NEW MIXTURE.—Those who cannot economically procure a supply of guano for their crops, will find an excellent substitute in the following. The quantity is for one acre, and will be found sufficient to ensure a good crop:—

Take two bushels of bone-dust, 4 bushels of ashes, 25 lbs. nitrate of potash, *salt-petre* 25 lbs.,

nitrate of soda, (*soda-salt-petre*) and 50 lbs. of common salt.

Mix the whole well together, sow broadcast, harrow in, and roll.

By many trials made with this mixture, it has been proved to be an excellent article, especially on corn or wheat.

For the New England Farmer.

MONTHLY FARMER FOR MARCH.

MR. BROWN:—I offer the following brief review of the March number for publication, by way of experiment. If my remarks on the various articles shall induce a more careful reading of the *Farmers*, one chief design will be accomplished; for I apprehend careless reading is becoming one of the vices of the time.

“Calendar for March.”—Pleasant remarks on this month of “many weathers,” with suggestions upon several topics of thought and action appropriate to the month. Books and study recommended. Now, that the prospect for the immediate establishment of agricultural schools has become rather dubious, let us resolve, like *Reap’s Reapers*, to take hold of the work ourselves.

“Peculiar Difficulties of New England Husbandry.”—From want of the 60,000 acre estates of England, our schemes of improvement must be more humble than theirs. There, one farmer directs 6000 pair of hands; here, often, two pair only. A difference too often overlooked in our “books.” Our soil, too, is poor; but our competitors, South and West, are fast reducing their to an equality with ours.

“Black Knots on Plum Trees.”—Experiments which show the cause of the trouble to be a small moth. The writer alludes to “remarks on ants and aphides,” which we hope to see before our trees are again infested by them. Necessity will soon bring us to the study of Entomology. If ladies will take hold of the subject, there may be hope; but at present, insects seem to have the advantage, altogether, of the men.

“Core Worm.”—A simple remedy proposed. Try it—it may do good.

“Chinese Farming.”—How much history tells of kings and fighters; how little of what we ought to know! Have looked over a large volume on China, lately published by Sears, without finding any answer to the question, how do the Chinese keep their land productive! Have always understood they saved everything.

“Cultivation of Flowers” recommended.

“Bristol County Agricultural Society.”—Notice of its “Transactions,” with a richly deserved compliment for the address of Hon. Mr. Winthrop. Following which, are notices of several other County “Transactions,” with an extract from Gov. Boutwell’s address before the Hillsboro’ (N. H.) Society. The Governor says “the intelligent cultivation of the land does not exhaust but enriches it.” Why, then, need England import bones, guano, &c.?

“The American Crab Apple.”—Never was much interested in crabby apples, generally, but this cut and description of the original, is certainly very interesting.

“Birds of New England,” No. 2, on the winter retreat of swallows. Our birds are fast de-

creasing, and the depredations of insects as rapidly increasing. Yet things in form of men kill little birds for pleasure!

"*Pea Fodder.*"—Pea vines, properly cured, recommended for fodder. My father always raised peas for pig-feed; after threshing, the vines were piled in a corner of the yard. Cattle, in the winter, used to make holes into the piles, up to their eyes and chew away upon it, for fun, as we thought, —for we never asked them to eat pea vines.

"*Live Fences.*"—Nearly from the first settlement of our country, attempts have been made to grow something like the hedges of England; yet, so far as I know, the first half mile of effective "live fence" in the United States is yet to be planted.

"*Farming Interests Neglected*" in the south half of Woodstock, Vt. A gloomy picture; but too truthful, I apprehend, of the state of most old agricultural sections of New England. I will here venture a caution to the writer of this article against trying on a very large scale that "sprout-to-be-stuck-in-a-potato" experiment he speaks of. It is an old humbug.

"*Farm Labor.*"—Inquiries and suggestions in relation to labor-saving machines.

"*Dwarfing Fruit Trees.*"—How much pains folks do take to "work against nature."

"*Hardy Fruits for the North.*"—Remarks by Mr. Burt, of Walpole, N. H., on the adaptation of particular fruits to particular localities. He places the Northern Spy in his list. Mr. Burt will gratify many readers of the *Farmer*, by giving the reasons which induced him to recommend this fruit for his section.

"*Vandalism.*"—Indignation for the destruction of shade trees in Waltham.

"*Legislative Agricultural Meeting.*"—Report of third meeting, Feb. 1, 1853. Although there may occasionally be a rather flighty speech made at the State House, are not the *Farmer* reports of them, alone, worth the subscription price for the year?

"*To Inventors.*"—"L. R." wants a simple machine to shovel manure, muck, &c., into his cart. Second the motion!

"*Analyses of Soils.*"—The writer is afraid some people expect too much of science in general, and of analyses of soils in particular.

"*Agricultural Implements.*"—Facts about plowing by steam—common plows—wood and iron harrows—horse rakes—mowing machines, &c.

"*History of the Borer.*" with directions for its prevention and destruction. One of those articles that are studied.

"*Experimental Farming.*"—Difficulties in the way both of theoretical and scientific farming.

"*Silesian Merino Ewes.*" with a pictured group, in which I see nothing to make one feel as John Randolph did, when he said he would go half a mile to kick a sheep.

"*A Good Example.*"—No doubt that patching pantaloons and darning stockings have kept many a man's head "above water" who claimed the credit for himself and boys, that was due to his wife and daughters. Mr. WURTON's name will be remembered, for his thought and deed.

"*Good Management vs. Bad Management.*"—A Nevel in the *Farmer*.

"*Cranberries.*"—Inducements and directions for cultivating this fruit.

"*Evergreen Sweet Corn.*"—A recommendation

of, and directions for raising it, &c., by E. P. Walton, Montpelier, Vt., who has seed for sale, at 50 cents per quart!

"*Carrots for Horses.*"—"To Kill Lice on Cattle." "*New England Farmer.*"—A glance at articles in first half of January number.

"*Thorn and Quince Stocks for Pears.*"—Reasons for preferring the quince.

"*Bloodgood and Rostiezer Pears*" recommended, with outlines of each.

"*Remedy for Choked Cattle,*" with cuts of the simple apparatus recommended.

Shorter Articles, on Raising Celery—A new Apple—Large Tree—Large Hogs—Use of Guano—How to make Hard Water Soft—A Mild Winter—Splendid Pear—At Home again—Large Steer—Lime—County Exhibitions, 1853—Clover Seed for an acre—Poetry, &c., with articles in the Ladies' and Boys' Departments, advertisements and index, conclude our bill of fare for the feast of March.

GUANO.

Of natural guano, the following is the result of an analysis made by VOECKL, and published in 1841 in the "*Bulletin Universelle de Geneve.*"

Urate of ammonia.....	9.0
Oxalate of ammonia.....	10.6
Oxalate of lime.....	7.0
Phosphate of ammonia.....	6.0
Phosphate of ammonia and magnesia.....	2.6
Sulphate of Potash.....	5.5
Sulphate of Soda.....	3.8
Muriate of ammonia.....	4.2
Phosphate of lime.....	14.3
Clay and sand.....	4.7
Undetermined and organic matters, (3 of which is soluble in water,) and water with traces of soluble salts of iron.....	32.3

100.

Of this "*undetermined organic matter,*" neither Liebig nor Vanguelin make any mention. In consequence of the very decided demonstrations by the farming community in favor of this fertilizer, and the anticipated failure of the natural supply, chemists have succeeded in compounding a substance which is said, by those who have tried it on various crops, to possess nearly if not quite the same virtues as the natural guano.

For the *New England Farmer*.

MUSIC OF THE CORN SHELLER.

MESSRS. EDITORS.—I have usually got out my corn by shelling by hand, (*a slow process.*) Last fall, I purchased a corn sheller, and have used it thus far through the winter, and I am well pleased with it; not only on account of the dispatch of business, but for the effect of the music it creates when in operation. I have been much troubled for years past, by rats and mice in my corn house destroying the corn; and it seemed almost impossible to keep them out of the house; but since I have used the sheller, which is placed in my corn house, I have not discovered a rat, or the mark of one, in the house. In case it will have a similar effect in other places, I would advise all my brother farmers, who have not got a sheller, to purchase one without delay.

F. KYLE,

Chester Village, 1853.

For the New England Farmer.

NEW ENGLAND HOUSEWIVES.

The following literary curiosity is from the *Southern Planter*, published at Richmond Va., and is worthy of the attention of our readers, as well for the peculiar force of its logic, as for its enlarged views of the rights of man, and the true position of woman. A few passages are put in *italics*, that they may be the more readily referred to.

NEW ENGLAND HOUSEWIVES.

Many a time have we heard the matrons of Virginia bemoan their lot. The ordinary troubles of a family are to them aggravated by what they think the hard responsibilities of their condition in the midst of slaves, whose labors in many cases they must direct, whose well being it is at all times a part of their duty to consult, and whose comfort in sickness, in infancy and in age, it is, or ought to be their special province to provide for. We have never sympathized with their repinings, because we have always thought that such labors were good for them—that *slavery had done them a decided benefit in giving them something to do; and that something equally well calculated to employ their hands and to engage their hearts.* We have always regarded it as one, and by no means the least, of the *blessings which we ascribe to slavery, and which makes us love the word, that it compels us, by interest, if you choose, to dispense the charities of life with no niggard hand, and to contribute so much of the poor rates without municipal requirement.*

We have sometimes heard these ladies compare their state with the imaginary comfort of free-soil dames, and, from mere weariness of spirit, wish themselves surrounded by the same circumstances of ease, comfort, and exemption from domestic care. We have combated this notion with them, have represented to them their superiority in the very particulars which formed the topics of their disparagement, and have exhorted them to patience and thankfulness. Of late we have been aided in these views by the two novels of a very charming writer, and have shown them how, both in *QUEENSBURY* and *THE WIFE OF WIND WORLD*, the authoress, having by her pictures of New England Rural Manners, shown its usefulness for the sake of the highest female refinement, has, in each case, translated her heroines to England in order that they might continue to maintain the highest graces of country life. Still our friends have been incredulous. These were but novels, they said, and the lady that wrote them, charming as she was, and no doubt sincere, filled too with the most beautiful sense of propriety, and refined to the utmost tension of female delicacy, was yet rather high strung, and may have pushed her fastidious imagination into matters of fact. But what can be said, when, (as in the following extracts from the address of Mr. FAENCH, associate editor of the *New England Farmer*, from which paper we have taken it, an address accredited to us by the regular editor as one of the three best that he had ever seen.) “the peculiar station which woman occupies in New England society” is made the subject of stringent comment in a public speech. We shall not attempt to add one touch to this picture by a native limner, familiar with the scene he paints, and endorsed for accuracy by one of the leading agricultural journals of his section. We offer this picture to the contemplation of our lady readers. It is not of our drawing. Let them ponder it—let them consider that “a majority of the wives of respectable New England farmers, *age, and of men of all other classes,*” in the country, are expected by their husbands “*to be at the same time cook and chambermaid, lady and serving girl, nurse and sempstress and governess, laundress and dairymaid;*” and then let them ask themselves, first, if they would change places with the New England matron? and second, if their husbands would impose as much labor on four slaves as the men of New England require of one wife?

“The matrons of Virginia,” says the writer, “bemoan their lot.” They envy the ladies of the North, “and wish themselves surrounded by the same circumstances of ease, comfort, and exemption from domestic care,” but he tells them they are ignorant of their true position, and he has, even, as he says, “combated this notion with them” and “exhorted them to patience and thankfulness.”

Surely, the ladies of Virginia, are entitled to a more respectful hearing, than this writer seems willing to give them. I have regarded these southern matrons as a highly educated, refined and intelligent class, over whom the natural principles of justice and humanity, and the teachings of the religion of Christ, have a controlling influence—an influence too powerful to be successfully “combat-

ted” by the poor sophistry of the author of the foregoing article.

They justly complain of the burdens which slavery imposes on women. He has “never sympathized with their repinings,” but has told them bluntly that “*such labors were good for them—that slavery has done them a decided benefit, in giving them something to do.*” His argument would seem to be correctly stated, in the following syllogism. *Labor is good for them, slavery brings them this labor, therefore slavery is good for them.* A most ingenious form of argument to establish the general proposition, that their condition is superior to that of “*Freesoil Dames,*” because the latter are in a position to labor!

But, perhaps, in the peculiar kind of labor which slavery imposes on southern ladies consists the blessing which that “peculiar institution” brings to them; the case, for instance, of some score or two of “the images of God in ebony,” “in sickness, in infancy and age,” which, to use again his language, “refines to the utmost tension of female delicacy” the character of woman! No doubt the nursing and watching over those, so degraded as to be unfit to take care of each other—an office which might well engage the attention of a Sister of Charity, or of an angel from Heaven, is, for the most part, faithfully performed by Virginia matrons, in their households; and this, surely, is a mission beyond the reach of Northern ladies, except, perhaps, the matrons of our almshouses and hospitals.

But that Southern ladies should regard such a necessity, however salutary its discipline, as “a hard responsibility,” and a burden peculiar to themselves, shows their just appreciation of their position.

The *Planter* invites a comparison between the position of woman at the North and South. We have enough at home to engage our attention, and need not to be reminded that our state of society is imperfect—that we have wrongs to be righted, and sins to be repented of, and unless challenged to do so, have no desire to institute comparisons between our condition and that of our Southern neighbors.

Personally, I am identified with no abolition or freesoil party, but have the feeling of every true man at the North on this subject, and if I have ever said, or thought, or done anything that may be fairly construed into a justification, excuse or apology for slavery, except as a mere temporary necessity, I humbly desire to repent of that transgression. If I have said, that the condition of woman is hard at the North, I have never said, for I have never thought, that it was more desirable at the South.

Without considering the one-half of the sex, that is bought and sold, and scourged, and every way dishonored, at the will of others, where slavery exists, a single glance at the position of a Southern lady as a mother, and a teacher of her children, will be enough to satisfy Northern women, that indeed, the heart of the Southern matron “knoweth its own bitterness.”

In the address, from which the editor of the *Southern Planter* has endeavored to deduce an argument for slavery, I spoke honestly, and earnestly, to New England men, of the condition of New England society, and cautioned them against allowing their personal schemes of business, or amuse-

ment, to take such forms, as to impose upon the other sex an undue share of life's burdens and cares. We have, in this part of New England, neither hunger, nor nakedness, nor ignorance, nor slavery. We regard labor as respectable for all, both men and women, and I have yet to learn that the latter, whatever cause may exist, have complained that their lines have not "fallen in pleasant places;" or that they envy the condition of the ladies of the South.

Should they do so, it is hoped they may find a more courteous champion than the ladies of Virginia seem, so fruitlessly, to have selected.

HENRY F. FRENCH.

Exeter, N. H., March 14, 1853.

RYE.

According to some writers, rye was derived originally from Crete. It is, however, no doubt, a factitious grain, like wheat, and other similar productions. The tradition of the Egyptians assigned its introduction among their ancestors to the beneficence of one of their principal deities, believing that before, both wheat and rye were found only in the woods. In its nutritive properties, this grain probably comes nearer to wheat than either corn or barley. In Pennsylvania and most of the New England States, rye is extensively cultivated, and where the soil is well adapted to it the crop is generally found to be lucrative. It requires a light, porous soil, with a sandy subsoil. In Russia and the German States, rye is the principal bread corn, and in about every country on the continent, it is cultivated much more extensively than wheat. It is there contemplated not only as a much more certain crop than the latter, but as demanding far less labor and manure. In Great Britain and Wales, where this grain was formerly grown in large quantities, its cultivation has of late years almost wholly ceased, and in Ireland and Scotland it at present engrosses much less attention than formerly, and can scarcely be enumerated among the bread grains of either country. On the pine plains land of Maine and New York, it is unquestionably the most certain and lucrative crop that can be grown. Both the summer and winter kinds do well on such soil.

MILLET.

This grain, where the seed is the principal object, may be got in any time before July. We have known affluent crops from seed sown as late as the fourth of this month; but as a general rule, the sowing ought not, perhaps, to be deferred beyond the last week in June. When *hay* is the main object of the cultivator, it must be sowed earlier. May is probably the best time. Convinced as we are of the great value of millet as a field crop, we are strongly desirous of seeing it more generally introduced—and especially in those sections where there is a large proportion of light, warm, soil, and on which it can, from various cir-

cumstances, be cultivated with far more success and profit, generally speaking, than any other grain.

For the New England Farmer.

THE CHURN.

MR. EDITOR:—In looking over the Feb. No. of your valuable journal, I find an inquiry in relation to the most available churn for large dairies. As you have not definitely answered your correspondent, J. R., perhaps through motives of prudence, many salesmen having a direct interest in the final decision of this question, I respectfully submit the result of my experience in using two churns now in my possession. I have used a common crank or flat churn nine years in my dairy of forty cows. It is an upright box, the arms or floats occupying the lower portico, with a flat lid on the top. By using this churn, which has much space within, above the floats which never break all of the cream, I have lost nearly one pound of butter in every twenty produced in it during the nine years I have used it. Feeling most sensibly, the loss I was sustaining in this way, a little over a year ago I caused a barrel rotary churn to be built for my dairy. It is a small cask fourteen inches by twenty-two, turns or rotates around a stationary bar placed in the upper portion of the interior space; and is provided with an apparatus for tempering the fluid by cold or warm water when necessary, which can be passed throughout the centre of the barrel before and during the operation of churning. This size will produce from twenty to thirty-five pounds of butter, and is sufficient for my dairy of under sixty cows.—One hundred pounds of butter can be produced in it from thick sour cream at three churnings in less than one hour.

The *Excelsior Churn* appears to fill a place in large dairies, which the old dash churn, to say nothing of the various patent churns, many of which are great favorites in the dairy, have not occupied. A practical test has demonstrated to all persons who have witnessed its operation that it works easily, makes no waste, and produces the finest quality of butter. Its cheap and effective tempering apparatus enables the dairyman to apply the water of his well or fountain to the centre of the barrel, which desideratum could never be attained in the old dash churn. The illustration and description recently published in the *Farmer*, is designed to awaken inquiry, and to shew dairyman at a glance the result of my humble efforts to avoid or save the waste of the churn. Wide fields, rich feed, and the best selected cows, fail to shew an increase in the ordinary product of the dairy, where an imperfect churn is daily wasting or turning small portions of rich cream to the "barrel," instead of the firkin. Query—which is the most profitable, to churn new milk, or milk and cream together when sour; or cream only taken from sour milk?

GEO. B. CLARKE.

Leonardsville, Madison Co., N. Y. March, 1853.

TO PREVENT MILDEW.—Mildew is one of the greatest pests of green-houses and all sorts of plant structures. The following remedy has been tried in the houses of the London Horticultural Society, and it is thought will prove efficacious: "Sulphur and unslaked lime put into a tub of water, in

which they are quickly and intimately mixed, and the trees and plants syringed with the clear liquid after these substances have settled at the bottom.

For the New England Farmer.

RURAL PLEASURES.

There is, perhaps, no situation in life which affords greater facilities for enjoyment, than that of the husbandman. Exempt from the many cares which throng the pathway of the professional man, the farmer finds ample opportunity to cultivate his mind and expand his intellect, and even while engaged in labor, may still be a learner from the great book of Nature. As the plowshare turns the sods, his eye wanders over the rich landscape, and, in the meandering streams, the wood-crowned hills and smiling vales, he traces the finger of God. The glory of the spring-time is not by him unheeded. He sees with delight the delicate verdure, mantling in beauty the awakening earth—he views with pleasure the fair petals of innumerable blossoms as they unfold to the genial sunbeams, and he feels upon his cheek, the soft breeze which is laden with their balmy perfume. For him, the minstrels of heaven have a song of joy, and all nature seems hymning an anthem of praise. Gladly the farmer greets the spring-time, and with a light heart prepares his fields, and sows the tiny seed, which will yet yield a glorious autumn offering. No feverish excitement disturbs his placid life—no wild dreams of fame and glory—no ambitious schemes, whose bright hopes gleam for a space, then fade in darkness away. His course is before him—simple and plain—peace and contentment are the inmates of his breast. Day after day beholds him at his healthful toil, and fortune smiles upon him. His table boasts few foreign luxuries, but fair plenty is ever there, and the viands produced by his own care are partaken of with a relish which the epicure might envy. Home is to the husbandman a delightful spot. Care flees from his fireside and the evening hours are spent in calm converse or innocent glee. When night's sombre curtains, enfold the earth, he finds a sweet repose, for toil has lent "a blissful zest to slumber." How many young men who now forsake their rural homes, and seek the crowded city, would escape the snares of the tempter and shun the cup of sorrow, if they remained upon the peaceful farms of their fathers.

E. C. L.

Lebanon, Ct.

THE AMERICAN CRAB APPLE.—The American Crab apple is found in the Southern and Middle Atlantic States and as far North as New York: and at the west as far north as Wisconsin. When in bloom we have found the forest for a considerable distance delightfully perfumed by a single wild tree;—decidedly the finest perfume to be found among American Trees and Shrubs, so far as we know. We should prefer it decidedly, as an ornamental tree, to the common Siberian Crab: and, as it grows in about our latitude at the West, should suppose that it might be introduced here. We are prompted to this notice by seeing the fruit figured in the *New England Farmer*. Why is it not found on any of our nursery catalogues?

Anonymous.

From the New England Farmer.

SOUTHERN SPRING.

[Extract of a letter dated Columbia, S. C., March 5, 1853.]

DEAR SIR:—The spring is not a forward one here; the plums, peaches and strawberries are in blossom, still the weather is cool. The planters are about planting their corn; some fields are already planted, and many others will be the coming week. The trees are beginning to put out their young leaves, and in a week or two we shall have spring in earnest. To-day we have had quite a snow storm, which lasted several hours, (the first snow this season,) but it soon disappeared.

I am glad that the good work of progress goes bravely on with you in the old Bay State. I hope that old Middlesex will not falter in her onward course, but will keep up with the times, and offer such inducements to her noble sons as to secure their best efforts for improvement in every branch of agricultural science, and in everything connected with mother earth.

Yours truly,

SOLON DIKE.

REMARKS.—We received the above on the morning of the 15th, and the night previous ice made half an inch thick in our dwelling, and the wind blew what the sailors call *half a gale*. The roads, which were all mud when the wind began, were soon "stiff as the ribs of death," in all their rough ugliness, and whe-u-un, how every thing cracked again!

For the New England Farmer.

PLOWS.

To the farmer who tills but few acres it is quite an event to get a new plow. If he gets the right one, he may follow it a score of years rejoicing in its good works. If the wrong one, he may endure it with vexation much longer than he ought. In short, it is a time well worthy of a confab with friends and neighbors; so I take the liberty to write to my friend the editor. The plow now wanted, is a plow for "old land," as we farmers call it, that is, land that was planted last year.—Our Agricultural Societies seem to have strangely neglected this part of the plowing business, and in consequence or not in consequence, the improvements in plows for this work seem to have progressed somewhat in the style of the truant's journey to school that slippery morn, viz., two steps back and one forward.

The improved plow described by Mr. Holbrook two years since may be just the thing wanted (though I am afraid it is more the thing for light, pliable soils than for our stiff, stony lands) but otherwise I think there has been no plow made for old land equal to the old-fashioned iron plows made twenty or thirty years ago—short, wide behind and high beam. I recollect one of that pattern, I often held when a boy; there was no maker's name on it, but "Boston Iron Co.," on the casting, and in truth it was rather an awkward looking concern, but out in the last year's corn and potato field, it did its work up in a style hard to be improved. Throwing the soil aside with a clean furrow—seldom or never clogging—not easily thrown out of its true path by every malicious pebble lying in ambush, but burying the litter and manure all under and leaving the plowed

land nearly as smooth as if harrowed. My present plow, purchased of a famous Boston establishment six years since, and having twenty years *improvements* on it since the old one, is long and narrow and the beam low. It takes the soil up gingerly and tenderly as if afraid of disarranging a particle; part of it remains up in the shape of a little ridge and part rolls back in the furrow. If there is much litter or coarse manure it clogs, and like all lazy plows that I have held, is thrown into fits at sight of a pebble. In short, to work with it, is a bore to any man who wishes to do his work with a contented mind and a clear conscience; I threw it aside last spring, and did all my work with a sod plow. But let us come to the point. I think of making another sally among the plow-makers this spring, and I wish to know if any of the old sort are yet in the market! If so, I shall be tempted to give all improvements the cold shoulder and grasp my old friend heartily.

By the humble **BACHELOR.**
 March 1, 1853.

REMARKS.—If "Bachelor" will call at the Agricultural Warehouse, Quincy Hall, we believe he may be accommodated to any kind of a plow he desires.

For the New England Farmer.

SHELL LIME.

SUMER BROWN, Esq.—I noticed in a late number of the *New England Farmer* an advertisement in reference to the manufacture and sale of shell lime with a recipe for its use in agriculture, which I think promises well to the *Farmer*; displaying the provident munificence of nature and its readiness to reward the hand of industry as applied in agriculture, one of the noblest and most favorable employments. The following is the recipe—viz:

Take four barrels of lime to one bushel of salt, and one cord of mud or peat with one bushel of common salt. Dissolve the salt in water; with this solution slake the lime, and mix this compound with the mud. The result of this may be explained in the following manner. The salt is decomposed, its acid passes to the lime, forming muriate of lime, and leaving caustic soda in the mixture, which causes decomposition in the mud and the air, which is known to pervade and fill light porous substances. This arrangement furnishes the presence of elements, which form a valuable and highly fertilizing compound. These are brought into commingled action the carbon and elements of the geine, the oxygen, the hydrogen and the nitrogen of the air and the water, and new compounds are formed. The caustic soda renders soluble the peat—carbonic acid is evolved—nitrogen, hydrogen and oxygen form nitric acid and ammonia. That which is now muriate of lime becomes carbonate of lime. The muriatic acid repasses to the soda, re-forming common salt. When the action has ceased, there is nitrate of ammonia, carbonate of lime, and common salt, with soluble geine. When applied to the soil and growing plants, the nitrate may all be transformed into vegetable life; the other salts, besides contributing to the formation of the plant, are ready to decompose the elements of the soil, and render it more rich in nutritious substance. Thus it will be seen that nature is in readiness to contribute a

rich reward to the industry of agriculture, and the farmer will be wise to regard her intimations.

The compound would be improved by the addition of ashes; but it is highly valuable without this addition, and forms a cheap economical, and certainly a highly valuable fertilizer.

BOWEN BARKER.

Hanson, 1853.

For the New England Farmer.

CELERY.

MR. EDITOR:—One word more about celery. It will soon be time to sow for celery that is to be dug in the fall; and it seems to me to be very important that all who intend to raise this article should get the *right kind*, for it costs no more to raise a *good variety*, than it does a *poor one*; and to those who have not been in the habit of raising celery, and intend to this year, I would say, when you go to buy your seed ask for "Seymour's," or "Seymour's Superb," as it is sometimes called. I think there is nothing better than this. I raised two kinds last year, and all who tried them pronounced "Seymour's" the best; sometimes I have bought what is called, "White Solid," but this is a great misnomer, for it is as hollow as a pumpkin stalk, and not much better for eating; it has proved so with me for several years. Seymour's are both white and solid, as well as good flavored. Winter celery should not be sown until the last of May or first of June. If any of your subscribers know of any better kind of celery than that which I have recommended, I should like to have them tell us what it is. **J. F. C. H.**

Newton Centre, March 14th, 1853.

EXTRACTS AND REPLIES.

To S. W. Jr., *North Wayne, Me.* What is the best food to keep hens on, and will it answer to keep them in a building which is partly under ground?

Corn, barley, oats, wheat, potatoes boiled and mixed with meal, bits of fresh meat and scraps occasionally, and cob meal, scalded in winter, are all excellent for fowls. All of them may not be necessary, though they like a variety of food.—To this must be added, always, access to gravel; and if they can have lime-mortar, old bones, broken and pounded oyster-shells, they will like it so much the better. All this, however, will fail to make them profitable layers unless you furnish them with a warm, dry place, for shelter. They dislike cold and snow. If the shelter is dry and warm, admitting the sun through the middle of the day, it will not be disagreeable to the fowls, even though partly under ground. We have kept 30 hens through the winter, and average one dozen eggs each day, and consider that the hens do all that ought to be required of them, when it is taken into account that there is constantly from three to five hens out of the 30, all the time clucking and wishing to sit. Indeed, this propensity to sit is the greatest trouble we have with fowls. Our hens gave the same product through the win-

ter of 1852, although the weather was extremely cold.

We are really obliged to S. W., Jr., for his good opinion of the *Farmer*, and will endeavor to continue it what he says it is now:—"a plain, common-sense paper, and such as every farmer ought to take."

To W. B. W., *Gilford, N. H.* Your letter was mislaid, or it would have been noticed sooner. Every churn that comes to us is recommended as the *cheapest and best*. For a dairy of six or eight cows we have found nothing better than the common thermometer churn. But then we have never used Willard's, Davis', Clarke's, and many others that are said to be good. The quotations in our price current list are corrected weekly by the dealers themselves, and the prices do not vary materially among them. Shorts have ranged considerably higher than quoted at the date of your letter.

To B. F. R., *Freehold, N. J.*—An acre would be quite small enough for the range of 200 fowls, and if it were *five* it would be better. There should be plenty of water, and shade—a running stream is desirable. We do not think a building of any size would be too large, providing it had a tight sunny corner for winter use. Build as large as you can afford. No part of farm stock suffers more from being crowded than our domestic fowls. We have never known them profitable where they were in large numbers and crowded. We have the plan of a building for fowls now in progress, which will be given soon. If you are near a city or village, where "swill" can be collected, you will find it excellent in such a collection of fowls.

To J. W., *North Springfield, Vt.*—"Can guano be used profitably in raising corn?" Yes, but we would not spread manure on the sward and turn it under, as your practice seems to be; because if the plowing is done well, the manure will be under the surface some 6 to 10 inches. Is not that the reason of your corn "invariably looking pale?" How will this plan answer:—Just before you wish to plant, turn over the sward, (already covered with a green crop,) to the depth of 8 or 10 inches, spread the manure broadcast and work it in well with the cultivator. Then, after furrowing, drop a handful of guano mixed with old muck or loam, into the hills! You then have the guano to give the plants their early support, while the broadcast manure will gradually decompose and feed the roots as they stretch away in search of sustenance. The application you make of two parts ashes and one of plaster, is capital.

THE POTATO DISEASE.—We have had on our table for some weeks a long report on this subject, from a committee of the New York Assembly, and also two or three long newspaper articles on the same subject, by CHAUNCY S. GOODRICH, who claims

to have found a remedy for the disease. He thinks the disease occasioned by climatic influences, and that the remedy must be the repeated reproduction of the potato from the seed balls. In the present crowded state of our columns, we have no room for extracts.

To E. A., *Providence, R. I.*—The plan of *feeding bees*, given below, Mr. A. says he has tried and found to work well.

"Take of cheap West India honey 1 gal., 10 lbs. of white coffee sugar and 2 qts. water; heat it all over the fire until it *begins* to boil, skim it, and when cool it is ready for use. Feed in a wooden trough, or tin pan, with perpendicular sides, with a float on the feed; the float is made of wood, an eighth of an inch thick, just large enough to fit the inside of the tin pan or wooden box, and have it play up and down easily. Fill the float with small holes by first making holes with a bradawl, then burn them out with a hot iron made for the purpose, but not so large as to admit a bee. Keep the feed in a cool place when not in use. Bees can be fed in this manner with the utmost ease, and in any kind of hive, either inside or out."

To J. J. J., *Wellsboro', Pa.*—Will send grafts of the Hunt Russet as requested—cannot obtain the pear.

A READER, *Taunton Ms.*—We should graft the pear tree you speak of with the Bartlett, as it does well on old trees, and will return you a crop in three or four years. The Vicar of Winkfield is not a first rate fruit, but is hardy and productive.

To C. H. R., *N——, N. H.*—You need a rich, moist loam, for strawberries—the deeper you dig it the better. Any good manure is suitable, liberally applied and well spaded in. Set the plants in April, when they have started, so that you can see which are the vigorous ones. Set them in rows three feet apart, and one foot apart in the row. Hovey's Seedling, Boston Pine, and Early Virginia, are perhaps, as good as any. When the plants are well up, an occasional sprinkling of guano water, say one or two quarts of guano to a barrel of rain or river water, if it is convenient, will have a wonderful effect on them. For further particulars, see the 3d vol. of the *New England Farmer*.

To L. T., *Sutton, Ms.*—Guano should not be suffered to take the place of manure which may be made from the natural resources of the farm. But as an adjunct, something to aid in restoring lands too far from home to cart manure to, or where it is found desirable to renovate old pastures, guano will come in as a capital auxiliary. So it may be profitably used in gardens, particularly in liquid form.

There are different qualities of guano—the Peruvian is considered the best. The price is now \$50 a ton. It may be found at Quincy Hall, Boston.

FORCING VEGETATION—HOT-BED.

We have compiled the above mode of management from SCHENK'S GARDENER'S TEXT-BOOK, published by J. P. JEWETT & Co., 17 Cornhill, Boston, which may be referred to for more particulars on the subject. Those unacquainted with the methods of forcing in hot-beds, will, of course, proceed carefully, step by step, by making such inquiries as will assist them in the work.

Forcing is the art of accelerating the growth of plants, by the warmth afforded by certain fermenting substances, so as to obtain vegetables at unusual seasons of the year. The practice appears to be as old as the time of the Romans. We consider its chief value to be in raising young plants for removal to the open ground in spring.

In American gardens, forcing under glass is generally conducted in frames and pits. There are several substances employed in obtaining this artificial heat, such as tanner's bark, leaves and grass, but the fresh dung of well-fed animals is generally preferred.

The first object is to get rid of the violent heat and rank vapor produced when fermentation is most powerful. For this purpose, a certain degree of moisture and air is necessary; and, therefore, it will be the gardener's business to place the dung in a conical-shaped heap near the place where wanted for use; to turn it over about once a week, shaking it well together, so that all parts may be equally exposed to the atmosphere; and to apply water when the materials appear at all dry. In cold, wet or boisterous weather, the heap ought to be covered to a moderate depth, with coarse stable litter.

There is considerable difference of opinion, with regard to the time that stable dung shall be permitted to lie thus in the heap. Care must be taken that the process is not carried too far, as in that case there will not be sufficient heat left for

the bed, and the plants will be rendered small and sickly. Perhaps it is a good rule, to wait until the greater part of the straw assumes a dark brown color.

The hot-bed should be in a place free from the shade of trees or buildings, and having an aspect rather a point eastward of the south. Shelter on the north-west is particularly necessary. The next labor will be to mark out the dimensions of the bed, which, on all sides, ought to be at least ten inches larger than the frame, and a stake should be driven down at each corner as a guide for keeping the edges perfectly straight.

The general rules of management are:—to keep the sashes covered with boards, mats or straw, during cold nights and severe storms; to admit air freely in pleasant weather, by sliding down the sashes for an inch or two, or by raising them up with wedges at the back part of the frame; and occasionally to apply water in moderate quantities, after it has been kept in the frame for at least twelve hours.

The air within the frame should be frequently renewed, or the plants will become spindling, with a sickly, yellowish color.

As soon as the heat is found to decline, "linings," as they are called, should be applied. The litter having been first removed, the edges of the bed are to be cut down by a spade close to the frame. It may, perhaps, be best to take only one side at a time, by which means the heat will be rendered more regular and permanent. Several holes are to be opened in the manure by the crowbar or a large stake, and a bank, or "lining," of fresh dung, is to take the place of that which has just been removed. The width of this "lining" will vary from ten to twenty inches, according to the coldness of the season; and it should not be carried up much higher than the bed, lest the violent heat escape directly into the mould, and thereby injure the roots of the plants. To prevent the heat being wasted in the air, it will be necessary to cover the

lining with a few inches of earth. This process may be repeated once or twice, until the maturity of the crop, or the increasing warmth of spring, shall render it useless.

For the New England Farmer.

A NEW GRASS.

TO THE HON. MARSHAL P. WILDER.

DEAR SIR:—You will justify me in taking the liberty to address you (through the *New England Farmer*, our common friend, and a medium of intercourse with the fraternity,) upon a subject of general interest, and especially in view of your known wishes and facilities for furthering the demands of our yeomanry. It is to introduce to your notice a new seedling variety of grass. A species of *Bromus* obtained from a single plant of surpassing luxuriance found among English turnips, grown from imported seed, which I transferred to my garden, and raised what seed I could, till I had twenty acres of it growing, when I invited the attention of our Worcester County Agricultural Society to it. Their President, the late Col. J. W. Lincoln, and Col. Estabrook, of the committee on farms, came and viewed it. One field of five acres, waving higher than their heads—some seven acres of pine plain in pasture; and a mow of three tons fragrant hay, cut in bloom, from one acre. The President remarked, "It is well worth a journey from Worcester, to see this *splendid grass*." A notice of it, with my letter, appeared in their Annual Report, 1851, pages 67 to 70, to which please refer. You may find a brief description of its properties in my letter to Hon. J. Davis, Chairman of the Agricultural Committee held in the State House, Feb. 13. Subject, Grasses; published in the *N. E. Farmer*, June, 1852, and *Mass. Ploughman*, April 17. I have taken much pains by correspondence and by sending specimens of my *Bromus* seed to England, and by comparing it with the seed of their Italian Rye Grass (which it most resembles) to ascertain its relative properties and value. The result is decidedly in favor of mine, as to early maturity,—greater productiveness—and the nutritive value of the seed being full twice as heavy as any English variety I have seen; which, I think, they never use for feed. This excellence I attribute to the artificial culture to which I have subjected it; always saving the seed from crops the first year after being sown, thus inducing the habit of an annual upon the plant. In other respects, *all they say is true of mine*. I quote a few of many encomiums.

The Messrs. Lawsons say, "The *Italian Rye Grass* produces many sub-varieties; as a proof of this, we received, one year, specimens of no less than fifty distinct spikes, collected in a field near North Berwick. It is eaten greedily by cattle, green or dry. It yields fifty per cent. of hay.—It is excellent feed for working horses and makes abundance of milk from cows. It is valuable as an early grass and retains its power of growth to a late period in the season. It withstands the severity of winter when sown late."

Mr. Dickinson says, "it fits well for sowing in mixture with other grasses intended for permanent pasture. It is in high repute, and is invaluable for the alternate husbandry. Ewes and lambs do better upon it than upon any thing I have given them." Colman says, "I saw it in great luxuri-

ance the second years' growth. I saw in Manchester the produce of three cuttings of one season of Italian rye grass, the united length of which was more than thirteen feet."

Lord Hatherton sows annually at Teddesley, about 100 acres of rye grass. His letter to me states that "common rye grass is always sown with clover, about one peck of rye grass seed to the acre. Italian rye grass is generally sown alone, three bushels to the acre, and may be mown three times." I will not multiply quotations, but submit it to your superior judgment, whether to present the subject to our State Legislature first, or to our State or National Board of Agriculture. If either or all of them should recommend it, or offer a premium for raising the seed for 2 or 3 years, or send some to different societies for distribution in small samples, its wide circulation would, in a few years, bring it beside our standard grasses with a fair supply.

It gives me increased pleasure to write you, as one aware of the great amount of capital and science, which in Europe and in England particularly, are embarked in agriculture, and of the costly experiments made, and in process, to ascertain and diffuse knowledge of the best measures—and by the *Royal* and other societies, clubs, and premiums, to awaken and encourage a deeper interest in improvements in every department of the art, requiring capital, labor and skill. If English landholders have demonstrated that the *heat* on a soil thoroughly underdrained and *deeply pulverized*, operates at once to promote vegetation, which *without* it would be employed in evaporating stagnant water, for days and perhaps for weeks, by which the crop is lessened, and often lost, it needs no argument to prove the wisdom of a measure that makes *sunshine* available for the profit of labor to prepare the soil as well as the woodpile. If by skilful feeding they have found that twice the amount of stock may be kept by summer soiling, that could be by pasturing, from the same acres, to which the *stalk* of all, being saved, is applied, and if absorbents may be used to prevent the escape of ammonia, and greatly to increase the value of manure; if a breed of cattle, sheep and swine, &c., may be obtained by systematic breeding and crossing that will return 20 or 30 per cent. more than otherwise could be had for the same cost—and if science and experience will equally improve fruit, vegetables, implements, buildings, &c., leading to eminence in farming there, then surely, those kindred spirits in our republic should be encouraged, who, by importing the choicest stock and seeds and trees, or by the press—or lectures—or by study of Nature's laws, by tests and demonstrations, are bringing out new facts and remedies—or by associations, visits and correspondence, are seeking to bring every farmer to share in the knowledge, toil and gain, to what the spirit of the age invites him, by co-operation. With respect, yours truly,

BENJAMIN WILLARD.

Lancaster, Jan. 30th, 1853.

Mr. CLIFF'S ADDRESS.—Through the polite attention of Rev. Mr. CLIFF, we have received the *Transactions of the Windham County, (Ct.) Agricultural Society*, for the year 1852, together with Mr. Cliff's Address. It is printed neatly, and the reports show a prosperous state of affairs in the

society. The address is a capital one, taking hold of the right points and urging them in the right way. It cannot fail of doing much good. We are indebted every day, to the clergy, for some of the best efforts put forth to advance the long neglected cause of agriculture—to dispel the gross darkness that sits upon the people in relation to an intelligent cultivation of the soil. Mr. CHITT will please accept our thanks. We hope, hereafter, to find room for extracts from the address.

LEGISLATIVE AGRICULTURAL MEETINGS.

SIXTH MEETING—TUESDAY EVENING, FEB. 22, 1853.

The sixth meeting of the series was held in the Representatives' Hall at the State House, on Tuesday evening.

The meeting was called to order by Mr. B. V. FRENCH, of Braintree, and Mr. PROCTOR, of Danvers, was invited to preside. The subject was then announced.

"The expediency of establishing Farmers' Institutes in the several counties of this State, and the best mode of perfecting such organizations."

Mr. PROCTOR, in taking the chair, remarked that he was unprepared to discuss the subject. He announced with regret, that President Hitchcock, of Amherst College, who had been expected to attend, and address the meeting, was not present. He expressed the opinion that the establishment of farmers' institutes, would prove most beneficent to the farmer,—more especially to the young farmer, who, by an attendance on their lectures and a participation in their discussions, could not fail to learn much that he needs to know. He would not have them established by the State, but formed and sustained at the expense of the farmers themselves.

AMASA WALKER expressed himself pleased with the subject, because it was in harmony with the spirit of the age, which tends to association, and because it is evident that there is a great revival in the agricultural interests of the Commonwealth. He thought there was no doubt that the project would meet the approbation of agriculturists throughout the State. The speaker alluded to the greatly increased interest which teachers' institutes have awakened in the cause of education, and remarked that something similar must be done to bring agricultural education home to the mass of the people. Farmers' institutes are just the things for diffusing agricultural information, both new and old. The scientific man and the practical farmer would be brought together, and every period of improvement in regard to agriculture would be brought forward and discussed. As evidence of the need of exciting increased interest in agriculture, he stated that not more than one man in three in the State now takes any interest

in the matter, and premiums are distributed only in the proportion of one in five towns.

Mr. BROWN, of the *New England Farmer*, in reply to a call from the chairman, said that he had no definite views in regard to the subject, but he thought it was necessary to do something to increase the interest in agriculture; and he believed that when the time came to establish institutes, they would accomplish great good, not only in this State, but throughout the country. But first, he thought, primary associations should be formed in each town by the farmers, for mutual consultation and discussion on all subjects of interest to them; and by this method they would qualify themselves to form and conduct the higher association, or institute. By the formation of farmers' clubs in each town, and the attendance of farmers upon them during the winter, he believed the lands and crops of such towns would exhibit an increase in value of one per cent. from year to year; farmers would become more intelligent by such mutual counsel. He thought the time had not come to call upon the State to do anything more for the farmer than she has done already, but when that time did come, he believed that she would be found liberal.

Mr. BROOKS, of Princeton, coincided with the views expressed by Mr. BROWN. He was not prepared at present, to advocate the establishment of an institution similar to the teachers' institute. That provides for lectures; and the lecturer must have a text or fact to speak upon; and where will that text come from? It must come from science; but we have no American agricultural science. We cannot raise either wheat or cattle as they do in England. The speaker enforced this point by illustrating the inapplicability of the conclusions of English science to farming in this country, as in draining. Yet, many towns, he said, already had small farmers' clubs, and he believed they would prove of great benefit.

Mr. FRENCH, of Braintree, would have the county societies set apart a day or half a day at their annual exhibitions, to listen to lectures from able men, and to discuss agricultural subjects. People are awaking to the importance of the agricultural interest, and demanding a higher class of instruction than they have hitherto obtained. Ohio has ninety county societies, sustained by the State. He did not agree with Mr. BROOKS, that we have no reliable agricultural science, and referred in proof to the statement of Mr. CURTIS, before the National Agricultural Society, that at one time he cultivated 8000 acres of land with 100 men, and raised only 700 bushels of wheat—so exhausted and sterile had become the soil; but after being instructed by Edmund Ruffin how to fertilize his land, obtained from it 7000 bushels of wheat.

Mr. FRENCH stated that from personal observa-

tion, he should judge that not more than six in one hundred acres of land throughout the State were in a condition fit for the use of the plow. He thought this strong evidence that our people need stimulating.

Dr. REYNOLDS, of Concord, remarked that it was a most important subject, upon the solution of which might depend the question whether our young men should cultivate their native acres, or dig in the golden sands of California or Australia, though it had been remarked that they were choosing the latter. What is necessary, is to make agriculture more respectable and successful—not that he meant it was not respectable, but that it should be made more respectable in the eyes of our young men, who are taught even by their fathers that it is unprofitable, and beneath the ambition of enterprising men; that it is fit only for men who can do nothing else; and that men who have failed in all things else can fall back upon it. Young men must be taught to give weight, influence and character to farming; and this can only be done by making it more intellectual. When the intellect is as vigorously exerted in agriculture as in other professions, it will engage the ambition of our young men.

Intercourse among men, he urged, was a great means of increasing knowledge, and by means of institutes the farmers would be brought into more frequent intercourse with each other, to their great benefit. The mind strikes out new paths, and new thoughts are eliminated. The speaker alluded to the teachers' institutes as improving and stimulating the teachers themselves, and rendering them more efficient, from which he inferred the same result would follow the establishment of institutes for the farmer.

He believed that much benefit would accrue from lectures, and had no fear from the diffusion of science even in its present state, or that the theories of scientific men would mislead our strong common-sense farmers to any great extent. Science is the basis of all true agriculture. The speaker recognized the necessity of kindling up an increased interest among the farmers in our State, and expressed the opinion that the Board of Education had a duty to discharge in reference to the matter. They should secure the introduction into our high schools of the study of agricultural chemistry, geology, &c. It would be of great benefit, and prepare the way for agricultural colleges. We should begin in the small circles.

Mr. SPRAGUE, of Duxbury, expressed himself favorable to the formation of such institutions, and gave it as his opinion that more is to be learned by intercourse with well informed men than in any other way. The difficulty with farmers, is, that they make a great many mistakes owing to a lack of accurate scientific knowledge. We cannot discuss agriculture without benefit.

Mr. COGGSWELL, of Bedford, remarked that the more intelligent the farmer, the more successful he would be,—farmers should be thinking, reflecting men, and should study their soils as closely as the physician does the *materia medica*.

Prof. NASH, of Amherst College, thought much might be done without legislative aid, by voluntary association. He agreed with Dr. REYNOLDS, that it is necessary to make farming appear more respectable to our sons, and the only way to do this is to make it more intellectual. These institutes will have a tendency to draw out the farmer, and make him more intelligent. In regard to lectures, the lecturer should not only be thoroughly versed in agricultural science, but also be a practical farmer, else his teachings will be liable to mislead.

Mr. BROOKS, of Princeton, in explanation of his former remarks, said he would not be understood as opposing science, lectures, or farmers' institutes. The meetings, so far as they bring farmers together, are useful. Farming is extremely variable, and the same rules of science will not always apply. As for instance you may raise wheat on one side of a hill, and not upon the other, although the soil is identically the same.

The hour of adjournment having arrived, the meeting adjourned until Tuesday evening next, when "The cultivation and preservation of Fruits" will be taken up for discussion, and an interesting meeting is anticipated.

For the New England Farmer.

HOUSING AND PAINTING FARM VEHICLES.

It is strange what a difference there is among farmers with regard to the importance of housing their wagons and carts. Prudent, economical men, in most things, are wholly insensible to the great loss they experience by allowing their expensive vehicles to be beaten upon and soaked by the storms, and checked and shrunk by the blazing sun.

Wagons and carts from the maker's shop are seldom well-painted. The owner gets so anxious to be using his new cart, and the old one seems so unbearable, that the cart is taken from the shop before the little openings in the wood and the joints are half filled with paint,—the farmer "guesses it will do," and away it goes to commence a straight-forward course to decay. A few days after, it rains. The cart body is soaked through. The joints absorb water and swell. By-and-by, when the water has dried out, after having been dragged about the farm for several days, the joints become loose. This process needs only to be repeated a sufficient number of times to give you a heavy, rickety body, which, in a few years, breaks up and sends you to the mechanic again.

But the wheels are the most important part. Upon them has the most labor been expended in proportion to their weight, and of them should the most care be taken. The hubs, generally, are made of elm. Elm, exposed to the weather, is of short duration. It is used because it is difficult to split it in driving the spokes. White-oak hubs invaria-

bly check and open, when uncovered by paint, and exposed to the weather. White-oak timber,—indeed all timber, loses its strength and tenacity after being again and again exposed to rain and air. The hub then grows soft, the spokes settle into it a very little, and the consequence is that the tire is loose, and the blacksmith's aid is needed.

A wagon left out of doors will in a few years become a spongy, heavy mass, unprofitable to use. As proof of the correctness of these remarks, we know of a farmer who has run down three sets of wheels by exposure, and not by work, while another has a pair of wheels perfectly sound, built a year or two before his neighbor's first pair. In the first case the wheels have never been housed, winter nor summer; but have been left by the road-side, as if impregnable as the stone wall to injury from the weather. In the other case the cart has been uniformly housed, and always well painted. It must be very intelligible to the reader which is the wiser course.

PAINTING FARM VEHICLES.

The reasons for painting farm vehicles as well as housing them are many and obvious. Paint affords a present shelter. You are sometimes necessarily out in the rain. Your well-painted wheel will be injured but a little. Paint closes up the pores and keeps in that life of the wood, which is its whole strength. Besides, a man will work more cheerfully and accomplish more when things are a "little decent" about him. The appearance of good, convenient, respectable vehicles about a farm is always agreeable to the stranger. Their influence too, upon the laborer's spirit and temper, is worthy of consideration.

A word as to the colors most suitable to use in painting. As your vehicles will have to be out in the hot sun, while in service, the lighter the color the less will the wood shrink. A wheel painted black will become as hot in the sun as the hand can bear; while another painted a light lead color, which is the cheapest, will be cold to the touch. Of course in the former case the wood will shrink, loosening the tire, while in the latter all will remain firm.

W. D. B.

Concord, 1853.

For the New England Farmer.

WHAT MANURE FOR SWAMP LAND?

MR. EDITOR:—I would like to inquire what is the best manure for swamp land, where the vegetable matter is two or more feet deep? I have used common horse manure with good success, after draining, plowing, pulling out the roots, &c., and seeding to grass in the fall. On such land I get about two tons to the acre, of English grass.

I have thought there might be a cheaper substance than manure to bring such lands into English grass, if I only knew what it was. I know that it is recommended by some of your writers, to spread over sand or gravel, and then manure, but that is too expensive here, where hay generally is about \$8 a ton.

E. SCOTT.

Ludlow, Vt., 1853.

REMARKS.—If you get two tons per acre as a general result, it ought to be a satisfactory crop, unless an extraordinary amount of money and labor is expended. There is nothing better, prob-

ably, in the long run, than good barn manure, composed of the droppings of horses, cattle, swine, sheep and fowls. But on some of your new swamp land you might do well to try lime on a small piece, on another ashes, on another guano, watching carefully the results of each. New swamp lands contain generally, most or all the elements which the plant needs; but they sometimes require sand or lime, as they have an excess of acids, at first unfavorable to the growth of the plant. Thorough plowing, plenty of composted manure, and such experiments as we have suggested, will bring you satisfactory results, if you persevere.

For the New England Farmer.

STOWELL'S EVERGREEN SWEET CORN.

He who expects to find this article as much superior to the common sweet corn, as the ambrosia of the gods is to the food of mortals, will lay down his cob, and pick his teeth in disappointment. He will rise from the table, and call it a humbug. The fact is, he who has good sweet corn upon his table, picked at the right time and well cooked, has an epicurean dish, that he might ask any sensible god in the mythology to partake of, without fear of refusal. Should some German commentator upon classic lore undertake to prove, that this was the veritable ambrosia, it would be difficult to disprove his position. The man who does not appreciate sweet corn, and consider it a standard of excellence, lacking no element of gustatory satisfaction, is not the man to appreciate anything. But were the Stowell's decidedly superior to all other kinds, for the table, we should not expect to have the multitude believe it, even after they had tried it. We have heard a very sensible man assert, that common field pumpkin made as good pies, as the marrow squash of Boston notoriety. From that date, our path was very much strengthened in the old adage, that there is no use in disputing about tastes. If the new variety of corn is as good as the old for the table, and has other excellencies that the old does not possess, it will prove an acquisition.

It has been introduced to the agricultural public, mainly through the agency of Prof. Mapes, who has sent out thousands of samples of the seed to the readers of the *Working Farmer* in various parts of the country. He gives the following account of its origin in his paper for Dec., 1850. "Stowell's sweet corn is a new sort, and is every way superior to any other we have seen; for after being pulled from the ground the stalks may be placed in a dry, cool place, free from moisture, frost, or violent currents of air, (to prevent drying,) and the grains will remain full and milky, for many months. Or the ears may be pulled in August, and by tying a string loosely around the small end, to prevent the husks from drying away from the ears, they may be laid on shelves, and kept moist and suitable for boiling, for a year or more. This corn is a hybrid between the menomony soft corn, and the northern sugar corn, and was first grown by Mr. Nathan Stowell, of Burlington, N. J. Near the close of the fair of the American Institute, 1850, I presented the managers with two ears pulled in August, 1849, and twelve ears pulled in 1850.

They were boiled and served up together, and appeared to be alike, and equal to corn fresh from the garden.

"The ears are larger than the usual sweet corn and contain twelve rows. To save the seed, it is necessary to place them in strong currents of air, freed from most of the husks, and assisted slightly by fire heat when nearly dry. In damp places this corn soon moulds, and becomes worthless. The seed, when dry, is but little thicker than writing paper, but is a sure grower. The stalks are very sweet, and valuable as fodder."

A writer in the *Rural New-Yorker* tried it in 1851, and speaks thus of it. "Until it began to tassel out, it appeared very much like enormous broom corn, and exhibited no symptoms of putting forth ears, until very late in the season, when it eared out rapidly, and bore three very large full ears on all the best stalks, and in some cases the fourth ear was fairly set. Only a very few of the stalks bore single ears. It matured rapidly and very perfectly, but it was many weeks after frost set in, and the corn was housed, and after the husks had become entirely white, before any of the kernels presented the shrivelled appearance of sweet corn."

"That it will do all that has been said of it, I have no reason to doubt. As far as my observation during one season extends, I am satisfied it is a most valuable acquisition to our sweet corn. It grows freely, is of the first quality, and produces in my garden this season far beyond any corn I have ever seen. Beside the greater number of ears on a stalk, each ear and kernel is very large, although it dries down for seed to a very small ear and kernel. Very few of the ears have less than fourteen rows, and I have just noticed an ear of it only 7 inches long and yet it had 16 rows, and contained more than 800 kernels. The day I planted this corn, I planted an equal number of hills of a very superior sweet corn, the kernels of which most perfectly resemble this, and although the exposure and soil was equal, yet the Stowell corn surpassed it in every respect. I shall try it another season with increased interest."

Another writer in the same paper gives us his experience for 1852. "When I read of the wonderful productiveness and keeping quality of this new kind of corn I rather regarded it as a humbug. However, I bought a gill of corn for 25 cents, and planted it May 25th in rather an unfavorable spot for late planting. But it matured in good time, and produced from three to seven perfect good ears on a stalk—and one stalk had on it sixteen—the shortest about two inches, but well filled out, and all ripe enough and good for seed. I wish to record my vote in favor of the Evergreen Corn—that it is no humbug."

I will add to these trials of the article my own experience for the last two seasons. I procured a few seeds from the office of the *Working Farmer* in New York in the spring of 1851. Planted them late, but owing to drought only 6 kernels came up. I had 18 perfect ears from these 6 kernels and two imperfect ones. This showed the corn a very superior bearer. The growth of stalks was large.

I had now seed enough to plant about one-third of an acre, after giving away some to friends. The soil was badly exhausted by tillage and was not highly manured. But the growth of stalks was large, and the yield of corn satisfactory, though

the season was one of great drought and corn suffered much throughout the country. Some of the stalks had three ears and many of them two, with settings for more, showing what it had a mind to do if there was only food enough under it. I have no doubt at all, that in very rich soil there will often be three ears upon a single stalk—and some stalks of twice that number. We may then set down the advantages of this sweet corn as mainly the following:—

1st. Its exquisite flavor is not injured by the hybridizing, as has been the case with other attempts at crossing the sweet corn with other varieties.

2nd. It secures a very much larger yield of corn. The number of rows upon an ear varies from 8 to 20; a very large proportion of them are 12 and upwards. Most of the larger ears have from 4 to 800 kernels upon them. Then we have more ears upon a stalk.

3d. It prolongs the season of green corn in the garden until frost comes, and if it be pulled up by the roots and sheltered, it lengthens it out until freezing weather.

4th. If you have a fruit room, where you can command the temperature, you can have green corn the year round on the cob. But as we have no such room, we have not tried this part of the experiment.

5th. It furnishes the largest amount of fodder of any kind of corn grown in the world. Prof. Mapes says, "the Stowell corn, when thickly sown, will yield double the burden of stalks and leaves of any other corn we have tried. It is more readily cured, and preferred by cattle even to the best English hay."

The only draw-back upon it, is the danger of its going back to the originals from which it was produced, a danger that is common to all hybrids, I believe, until they have become very thoroughly established. Whether the variety of rows that the different ears assume is any indication of a relapse, the experimenter must judge for himself. I have full confidence in the article, and believe it a great acquisition to the garden and the farm.

W. CLIFT.

Stonington, Ct., Jan. 17, 1853.

MILK TRADE OF NEW YORK.

We have before us an elegantly printed volume of 118 pages, published by FOWLERS & WELLS, Boston, in which it is stated how the production, manufacture and sale of milk in the city of New York and the vicinity is managed. By JOHN MULLALLY, with an introduction by Dr. R. T. TRALL. We must say that the developments are of the most astounding as well as disgusting character. It is no longer a wonder that upwards of nine thousand children die annually in the city of New York, and as is supposed by the physicians, poisoned by an article called milk.

Mr. MULLALLY, and all engaged in exposing this iniquitous and brutalizing business, are entitled to the thanks of the community for their efforts in the matter. The book should be in the hands of every head of a family, that parents may see what it is they feed to their children under the name of milk! The milk business in our New England ci-

ties is fast becoming an important one, and unless there are proper guards and restraints thrown around it, we shall, quite likely, by-and-by, have a similar state of things among us here. There are frauds practised within our own personal knowledge, which lead us to this opinion. The book may be sent by mail to any part of the country for a trifling postage. The *New York Courier* says Mr. MULLALLY has given a fair, faithful and impartial view of the whole milk trade in that city:—

“He exposes the horrible system of distillery milk manufacturers—the process of making sweet cream out of distillery milk, hogs or calves brains, molasses and chalk—and sketches with a vivid and powerful pen the multitude of evils that arise from the infamous traffic. He gives us a description of a swill milk establishment and its internal economy, as well as the disgusting practices and brutality of those employed in them—a description almost enough to make the reader forswear the use of milk in the city forever. The *exposés* of the work are positively shocking. We knew that abominable, disgusting frauds were practiced by the milk dealers of the city, but really, we were not prepared for such an exhibition of human depravity and cupidity as is here bared to our view.”

For the New England Farmer.

FARMERS' LIBRARIES.

MR. EDITOR:—In a former number of the *Farmer* I made some remarks on the benefits of Agricultural lectures in lyceums. This was done under the impression that such institutions were in operation in all, or nearly every town and hamlet wherever the remarks might be so fortunate as to be read. I suppose such institutions are, through the winter months, in existence almost everywhere. But a new question comes up with regard to them. Are they established on the principle of firmness, and conducted with the systematic order that such associations should be? I refer now to lyceums in agricultural communities, where the intellectual wants are more for agricultural information, and prosperity arises more from agricultural success than from any other natural cause.

Now I have a beau ideal of what such a lyceum should be. In the first place, it should be an *agricultural lyceum*, embracing in its phalanx those who design to cultivate the earth as a profession, and who have enough respect for that profession to give their influence and hearty good-will to elevate it to the position where nature and nature's God designed it should rank. I am very well aware this picture, which should everywhere be visible, is a bold one, and implies many things. In the first place, I suppose it clearly shows, that to be a farmer does not imply “a mere clop-hopper,” an animated mass of clay whose noblest attribute is physical energy, excited by the idea of adding field to field, and increasing the swelling numbers of herds and flocks.

No, the position I take elevates him above all this, and defines him as an *intellectual* being, sent into the world to pluck out the thorns and thistles that man's perverseness sowed, and plant roses and myrtles in their place. It is for him to make the desert smile in verdure, and waste places to yield bountiful harvests. He is, through all coming

time, to give bread to the millions of earth, and when he draws its rich treasure from her teeming bosom, he must do it in so kind and restoring a manner as not to exhaust her resources. *Mind* must guide in these operations, and to do it successfully, mind must be enlightened by science as well as aided by experience, or too often its noblest efforts will prove abortive.

Now, how is this farmers' lyceum to aid him in this intellectual culture which is so very essential to the cultivation of the earth? We have spoken of lectures as one means, a very important one, too, on many accounts. But these are incidental, *periodical*, coming, it may be, once a month, though I should hope oftener. At any rate, there must be a gap between them, and these gaps in the progress of mind, like the rent in a garment, unless fitted up and closed, will be very apt to become larger, until the whole is rent. I say, then, to fill up this empty chasm as it will too often prove, that in connection with, and as a part of these lyceums, the library should form an important feature.

Agricultural libraries among farmers are not an unknown feature of the age; all, however, do not seem disposed to possess them. But get up such libraries in connection with the lyceum, and for ought we know, all would read. At least, we may fairly suppose that many will. Now how trifling would be the expense for the members of an agricultural lyceum to take all the first-class agricultural publications. And with an equal sum thereto added, what rich collections would be made each year in scientific works on matters relating to the farmer's well being. By these, young farmers would be taught the principles and progress of science, and by the former, he could learn the result of these principles when reduced to practice, their failures and successes.

O! what a beautiful ornament such an institution, endowed with a well selected library, adapted to its progress, would be to any town in our good old State. Yet how many such can our State boast! Have we one! Where is the goodly land where it may be found! We would gladly go there in the expectation of seeing unusual thrift, countenances beaming with happiness and contentment, bought by the rich gift of intelligence, operating like a main-spring to regulate all movements.

How many farmers have we in Massachusetts, who will pledge themselves to become even sitting and hearing members of such an association! If there is a town where ten, nay five, can be found, who will meet once a week to hear and talk about farming,—*resolved* that noble effects shall grow out of it, the agricultural destiny of that town can be saved. A lyceum, like the one I would have in every town, would soon be established, the intelligence of the inhabitants would brighten under its influence,—a purer stream of thought breaking out, and fed from fountains of truth, would purify all parts; the earth would smile under more varied and richer harvests. Here it would be found that competence and wealth could be drawn from the earth, not by “servile labor,” but by well-directed, careful industry, such as men in every sphere must practice in order to succeed—in short, happiness as pure, intelligence as high, refinement as chaste, as earth can afford, would here be found. Taste would aid economy in rearing buildings, planting trees, dividing of fields—indeed, in every

thing to make earth beautiful, home delightful, and all things pleasant to enjoy.

And would not these attractions tend to check the spirit of discontent which is now bringing so many young men into scenes and occupations which are drudgery in comparison with the farmer's life? Farmers in the present day, if you would have your sons respect the profession which you have followed so calmly through life, if you would have them stay "on the old homestead," dear to you from a thousand associations, and which you may wish to retain in your family,—if you would save them from vice and folly—to which new scenes frequently allure,—teach them that mind can find as great a sphere for operation in the farming fields as in the pent-up shops and counting-rooms, and that independence is easier won in the pure air of the country, than in the dingy, contaminated atmosphere of town, and encourage the farmers' lyceum as a means of elevating them to the positions they so earnestly desire. W. B.

Edmwood, Jan. 22, 1853.

REMARKS—We commend the above remarks to everybody. It will be gratifying to friend B. to learn that the farmers of the State are occasionally getting an agricultural lecture in the town lyceums, and surprise him as much to be informed that probably not one town in ten in the commonwealth has a farmer's club or lyceum, where agriculture, in its higher phases, is discussed. Here and there, in the town libraries, a few agricultural books are supplied. Where there are no town libraries, farmers cannot do better than to form a club, and purchase a few of the best books for their own purposes, and when the town library is formed, merge them in that.

ROOTS VS. HAY.

Many farmers are loud in their denunciations of roots as a substitute for hay in feeding stock. They regard them as vastly more expensive than the latter, and in every important respect, inferior. Some who were formerly loud in their praises of ruta бага, sugar beet, parsnips, carrots, &c., are now as loud in their denunciations. Truth, we opine, hovers in the middle region between these extremes, and it may not be improper to call the attention of those interested in the premises, to a few facts which have a very important and direct bearing upon the subject.

As far as mere nutriment is involved, we are by no means in the dark concerning the value of any farm product, not excepting even the meanest and most worthless. Science has already made us acquainted with this part of the subject. We know that one thousand parts of the potato, for instance, contains from 200 to 260 parts of nutritive matter, consisting mostly of starch with a small admixture of mucilage—from 15 to 26 of saccharine matter, and from 30 to 40 of gluten.

The common red beet contains, in 1000 parts, 150 parts of nutritive matter—i. e., 14 parts of

starch, 121 of saccharine matter, and 18 or 14 of gluten.

Mangel wurtzel contains, in 1000 parts, 136 parts of alimentary matter, which is made up of 13 parts of starch, 119 saccharine matter, and 4 of gluten.

English turnips, in 1000 parts, contain 42 parts of nutritive matter, i. e., 7 of starch, and 34 of saccharine matter.

The ruta бага—the root sometimes denounced at this day with great virulence—contains in 1000 parts, 64 parts nutritive matter, consisting of 9 parts of starch, 51 saccharine matter and 2 of gluten. In 1000 parts, the parsnip affords 100 of nutritive matter, 10 of which are starch, and the residue saccharine substance.

The carrot, in 1000 parts, affords 98 of nutritive matter; 3 of which are starch and 95 of saccharine matter. There is also in addition to these, an extract which appears insoluble.

But these nutritive products are not the only valuable parts—the remainder of the vegetables is composed of fibrous substance which assists alimentation by communicating to the stomach the stimulus of distention, and by other means not yet fully ascertained.

Now let us examine clover. Of this hay, 1000 parts contain about 41 parts of alimentary, of which 32 are starch, 3 saccharine matter, 2 gluten, and 3 insoluble vegetable extract.

Of herds-grass (*Phleum Pratense*) we have no very reliable analyses, as yet. Some chemists set down the nutritive matter it contains at 100, others at 89, 90 and 97, in 1000 parts.

If we ascertain the number of tons of either of the above named roots, produced on an acre of any lesser extent of surface, with the cost of production, we may, by the assistance of the above table, decide with a tolerable degree of accuracy as to the specific value of each, compared with hay, or any other description of fodder. That a vastly greater amount of fodder may be obtained from an acre cultivated in roots than from a similar extent of surface in grass, is a point already too obvious to need any demonstration. The following from the *Newark Daily Advertiser* shows what may be expected, with proper care from the potato:—

"Mr. JOSEPH D. COX raised from an ounce and a quarter of seed, 40 Rohan potatoes, weighing 18 lbs. which he tells us, after an accurate measurement of the ground occupied, is at the rate of 1440 bushels to the acre. He cut his seed into five tubers, and the produce is equal to 225 bushels of potatoes to one bushel of seed. The largest potato weighs about 2 pounds. The vine grew eleven feet three inches."

From the *Farmer and Gardener* we extract the following on "Horse Feed."

"There is no one who regards the comfort of domestic animals—those noble creatures which contribute so much to the comfort of every home—stead, whether it be the splendid establishment of

the rich, or the more humble domicile of the poor, but must rejoice to learn that the *root culture* is gaining favor with most intelligent farmers. The advantages, indeed, which result from devoting a few acres to such purposes are so striking, and add so much to the profit and economy of every well conducted farm, that one wonders how intelligent agriculturists could so long have rejected the evidences which have so obviously presented themselves for consideration; and with a view of bringing these facts more immediately to view, we will freely state them.

"To begin, then, we will premise, that each working horse will consume three gallons of corn per day, (equal to that, without hay) or 1095 gallons per year. Now if we take thirty bushels as the average yield of an acre in corn, which is a large one, it will take four acres, sixty perches of ground to raise corn enough to sustain a single horse. On the other hand let us suppose that an acre in carrots will raise three hundred bushels, (and this is a small average, for seven hundred bushels have often been produced on an acre,) and as it has been ascertained that three pecks of this root are sufficient to sustain a horse well at labor, and as there are 12 hundred pecks in three hundred bushels, so will one acre sustain a horse one year and thirty-five days, making a saving of three acres and ninety perches of land, and nearly the equivalent of that amount of labor is tillage, as all will admit that if the carrots be *judiciously drilled*, the amount of labor to be performed on their culture is very little greater than what is requisite to secure a good yield of corn—one thinning and three hoeings being all that is necessary to ensure a good crop. As to manuring, we will observe that they do not require more than ought to be given to corn, as less than twenty loads should not be devoted to either. The gathering and preservation is, to be sure, more tedious per acre; but when the labor to be bestowed on four acres and ninety perches in corn, is compared with that requisite for one acre of carrots, we think the amount will stand decidedly in favor of the latter."

That the writer of the foregoing should have indulged the belief, as he seems to have done, that seven hundred bushels is to be regarded as the *maximum* yield of an acre cultivated *judiciously* in this root, is certainly deserving of surprise. A Mr. Little residing in Newbury, or Newburyport, in this State, some years since harvested twice that quantity—1400 from one acre, and in the reports of many of our agricultural societies, as well as those of Great Britain, it is seldom that any crop not exceeding seven hundred bushels is mentioned. The sugar beet, mangel wurtzel, and other popular root crops, often exceed one thousand. The latter are perhaps less expensive, so far as cultivation is concerned, than the carrot; but they are less nutritive, and are supposed to be more exhausting to the soil on which they grow. For neat stock, the parsnip is now highly esteemed by cattle breeders, both in this country and in Europe. Its yield is about equal to that of the carrot, and it requires about the same soil and treatment. It is an excellent feed for hogs, sheep, and other stock.

POTATOES—INTERESTING EXPERIMENT.

The Journal of the New York State Agricultural Society contains a very elaborate and carefully prepared table, showing the result of experiments in the cultivation of potatoes, in every possible mode, and under all the different circumstances which could well be conceived; the whole forming a mass of information seldom found condensed into so small a compass. It is from the pen of our friend H. H. Eastman, Esq., of Marshall, one of the best practical farmers in the State—a careful experimenter and exact observer of results. In this table Mr. E. has presented the result of his experiments with such exactness, and in so concise a form, as to be readily understood by the reader. We only regret that it is so formidable as to prevent its being laid before our readers in detail, especially as the rule and figure work in the table is very inconvenient for our columns. We may, however, as briefly as may be, state some of the results of the experiments, as gathered from a careful perusal of the table, hoping at some future time to present the matter in a more acceptable form.

1. *Manures.* The experiments embrace Hog manure, Fermented and Unfermented Yard Manure, Compost, Manure of Fowls, Lime, Ashes, Gypsum, Sulphur, Saltpetre, &c. &c. The results are decidedly favorable to the use of Hog manure the manure of Fowls coming next, the Compost next, then the Unfermented Manure. The Lime and Gypsum did not increase the yield beyond that part on which no manure was used. The same may be said of the Sulphur and Saltpetre.

2. *Time of Planting.* The earliest planting proved decidedly best—the difference between the 18th and 28th May being 19 bushels per acre, and a further reduction on that portion planted as late as 10th June of 34 bushels per acre, with a decided advantage as to size and quality in favor of those planted early.

3. *Whole and Cut; and Large and Small Seed.* Here the result proves precisely as we anticipated. The seed from large potatoes produced decidedly best. We will give the exact statement.

		Weight of Seed.	Weight of Product.	Bushels pr acre.
Large Potatoes	One whole in a hill,	10 lbs. 6 oz.	71 lbs. 8 oz.	193
Large Potatoes	Two halves in each hill,	10 lbs. 6 oz.	81 lbs.	217
Large Potatoes	One-half in each hill,	5 lbs. 3 oz.	52 lbs.	139
Large Potatoes	4 quarters in each hill.	9 lbs.	58 lbs.	156

Thus far with reference to cut and uncut; those halved producing most when used in the same quantity, but a little smaller in size than the product from the whole seeds. The produce of the quartered seed was much smaller and inferior. The following is a pretty clear test between large and small seed.

	Weight of Seed.	Weight of Product.	Bushels pr acre.
Large, one whole in hill,	12 lbs. 4 oz.	80 lbs.	215
Medium, " "	6 lbs.	50 lbs. 8 oz.	136
Small, " "	3 lbs. 7 oz.	43 lbs. 8 oz.	117
Small, two whole in hill,	6 lbs. 14 oz.	51 lbs.	136
Small, four whole in hill,	9 lbs.	63 lbs.	167

The produce of small seed inferior and unmarketable.

A very clear demonstration, so far as our experiment goes, in favor of large seed, a result which

will, we doubt not, be generally reached in all experiments, with whatever crop, between perfect and imperfect seed. There are many other results to be drawn from this paper, which we should be glad to lay before our readers, could we conveniently do so. The public are under obligations to Mr. Eastman for this elaborate and accurate experiment, and we hope he may repeat it another season.—*New York Farmer.*

For the New England Farmer.

MANURES.

MESSEURS. EDITORS:—In the *New England Farmer* for Feb. 9, which I received a few days ago, about ten days after time, I perceive a query by J. R. "If the manure, liquid and solid, produced by feeding on the 'estover of an acre' would not return to the ground, 'nearly the value it has given out,' of mineral matter?" And after the query, the writer says, "I suppose that mineral substances, as lime, silice, &c., are not digested in the stomach of the animal, and that only a small amount of them is taken into the circulation, but that they pass off in the dejections, and may thus all be returned to the soil, and the estover be used at the same time as food for the stock."

It was so manifest to me that your querist is an expert in the animal physiology, of which I have little knowledge, and that his query was not proposed as seeking information, but as a modest mode of conveying instruction, that I did not design to make an answer, which evidently was not desired by him. But on reflection, I have thought that if J. R. would state more fully his views in the matter, in doing so he would not only correct my erroneous idea, but would probably be giving valuable instruction to other of your readers, and therefore conclude to answer the query, by stating what my view was. I take the succeeding clause above quoted, as a part of the proposition implied in the query, which is, that the dejections of the cow produced by or resulting from the feeding of a corn stalk will impart as much mineral matter to the soil as the corn stalk itself would have done.

My answer is that I certainly did not, by any means, suppose this to be the case. I considered that when the cow had laid in her bone and milk from the lime of the corn-stalk that it would be sensibly diminished, and that the amount passed off in the dejections would be much less than the portion taken into the stomach in the corn stalk. Further, I supposed also that a considerable portion of the salts taken into the stomach with the food, passed off in the perspirations of the animal, while still another portion was deposited in the blood and flesh. And further, I supposed that some portion of what passed off in the dejections would be dissolved and lost in the barn-yard, passing into the earth there, or into the atmosphere. By these multiplied means of abstractions, I considered that much the largest portion of the mineral matters would be lost, and that the stable matter, (the word was correctly printed as it was written, and written as designed) produced from a corn stalk fed to a cow would return to the ground but a small part of the mineral matters which were contained in the stalk itself.

But you will please remind J. R. that the phrase mineral matters was not used in the "Fireside Talk." It was said "the ground receives back

nearly the same value it has given out, and I think more, in amount of fertilizing matter, than in a cord of stable matter." My idea was this. That a large portion, say seven or eight tenths parts of the corn-stalk, consists of carbon and oxygen, which by the decay of the stalk in the earth would be set free and deposited in the earth in form of carbonic acid, the great thing necessary for the plant; that another considerable portion consisting of hydrogen and nitrogen, would in the same manner impart ammonia to the soil, both of which it had taken up partly from the soil, (or would,) and partly from the atmosphere. That the first of these would be principally, if not wholly, and the last partially lost in passing the stalk through the cow. That the mineral matters constituted only from one to two tenths parts of the stalk, and that the greatest part of that would be lost, as above explained.

I have stated my ideas exactly and definitely, in order that not only myself, but the public may have the benefit of the correction of your correspondent J. R. in fall in relation to this matter, and that my error may be wholly rectified.

It seems to me that my farm must become to me a mine of wealth, if I can pass the crop through the cattle, and after that, from the dejections, return even all the mineral matter taken from it; but I desire also to know more exactly how this is with all the remaining ingredients of the corn-stalk, if any there are. B.

BITS OF THOUGHT.

To raise good cattle, a farm should be in such a state that it would produce good corn, good cabbages, or good clover.

An increase of farm products lessens the market price, and the consumer is more benefited than the producer. Therefore the encouragement of agriculture is the interest of the whole people. It is the first duty of States to encourage agricultural improvement.

The brightness of the plow-share will prove a better security to our republican institutions than all the windy patriotism of long speeches in Congress.

He who encourages young men in the pursuit of agriculture is doing a good work for the morals of society a hundred years hence.

The lady who treats the husbandman with scorn, because he is a farmer, contributes something towards increasing the number of candidates for the State prison and the gallows.

All the true honor or happiness there is in this world follows labor. Were it not for working-men, there could be no progress in either science or art. Working-men are earth's true nobility. Those who live without work are all paupers.

For the community to honor one who spends life in genteel idleness, is like dressing a hog in silk stockings.

Mirth and vanity are known like a bottle of beer; but wisdom and virtue by their abundant products for lasting good. It is not the most show that does the most service. Still water often runs deep.

A. G. C.

—*Granite Farmer.*

LEGISLATIVE AGRICULTURAL MEETINGS.

SEVENTH MEETING—TUESDAY EVENING, MARCH 1, 1853.

The seventh meeting of the season was held at the State House on Tuesday evening. The meeting was called to order by Mr. FRENCH, of Braintree, and JOHN C. GRAY, of Boston, was called to the chair.

The subject for discussion was "*The Cultivation and Preservation of Fruit Trees.*"

Mr. GRAY, upon taking the chair, submitted some excellent practical remarks in regard to the cultivation of fruits. The plum, he said, was very difficult to raise good crops of, from year to year, and they are very subject to the ravages of the curculio. In respect to *warts upon plum trees*, he said it had been recommended as the best method to get rid of them, to cut them off in the early stages of their development, and rub the wound with salt.

In the cultivation of peach trees, pruning is absolutely necessary. The last year's growth of bearing branches, which may be known by a red color, should be cut down one-half to two-thirds, and the whole tree should be kept down. It is subject to a borer distinct from the apple borer, an effectual remedy for which is to dig around the tree in March and put in unleached ashes. They should be planted twenty feet apart, and a large portion of the fruit should be removed. Two men can remove the surplus fruit and search for borers, at the rate of sixty trees per day. As a remedy for the curling of the leaves, cutting them off was recommended; the leaves will put out a new set which will be exempt from this defect. The soil should not be over rich—such as would be rather poor for apples—and cultivating vegetables in the orchard is found to be of great advantage.

Prof. NASH, of Amherst College, said he had noticed two years ago that some peach trees which stood in clusters, bore bountifully, while trees which were isolated produced scarcely any. He desired to know the reason for this.

Major WHEELER, of Framingham, said it was owing to the location of the trees, and not in their being placed in clusters. Peaches will not flourish in cold, low lands, but require warm soils, which are found only upon elevated situations. In his opinion, we have as favorable a climate as any in the country for peaches. He had lately visited New Jersey, and from the information gathered there, he was convinced that our climate was more favorable, in some respects, than that enjoyed there. In New Jersey, owing to the earliness of the season, they are subject to frosts, after the fruit is set,—a thing which seldom occurs among us. The highest hills are the best for peaches, from being warmest. He knew of some hills in Framingham where crops had not failed for thirty years. He considered success certain, if peaches

were cultivated on elevated land. It is important, too, to remove a large portion of the blossoms, as a tree brings forth six times as many blows as can come to maturity. To kill the borer, he used ley, and did not believe it would injure the trees in the least. He had, for experiment, used two pounds of potash to a gallon of water, and discovered not the least injury in applying it to young trees in his nursery. Nothing he considered so effective for destroying the borer. Generally, puts two pounds of potash into nine or ten quarts of water, which he thought strong enough.

In setting out trees, his rule was to dig a hole six feet over and two deep, pulverizing the soil well, and putting the best at the bottom, and then plowing the ground with a subsoil plow. He never "mulched" his trees. If the ground is well pulverized and cultivated through the summer, there is no danger of the trees suffering from drought.

In regard to trimming trees, it is very important that the apple should be well trimmed. He trimmed his trees to the shape of an inverted umbrella.

Mr. ADAMS, of Newbury, remarked that a great many trees were ruined from a want of care in taking them from the nursery. The roots should be taken up as whole as possible, and a spade should never be used if it can be dispensed with. His method was for one or two to take hold of a tree and pull it up. Every root of any size should be cut off where broken with a sharp knife. Dig the hole six inches larger than the roots spread, and set the tree so that when the ground settles the trees may stand as they did in the nursery. If the land is in a good state, no manure is necessary, but the soil should be well pulverized, the roots placed in a natural position, lifting the soil in around the roots and fibres, and the earth left free and loose about the tree, without being trodden. He had set a large number of trees in this manner, and on comparing them with those which remained in the nursery, could not perceive that they had been checked the least in their growth; the land, however, was in a little better condition than the nursery land. The soil was a gravelly loam. If orchard land is tilled there is no danger from drought. Orchards need as much care as green-houses. He should plant his trees twenty-five feet apart.

In regard to trimming, he thought that a young orchard needed looking after every year, and some limbs taken out. They grow too thick, and require strict attention to shape them before they get too large. Many are in the habit of using saws in pruning their trees, and leaving the end of the limb rough, which should be trimmed smooth with a knife, and then it will heal over.

The speaker also made some remarks in relation to the running out of fruit, the reclamation of old

orchards, &c. He contended that fruits would run out, and in proof cited a case which had come under his observation. The fruit of young trees grafted from the old ones had the same defects that the fruit from the old trees had.

He thought old orchards might be brought into a state to last for a number of years, if taken in hand in season.

In keeping fruit, Mr. ADAMS said his plan was to place his apples on shelves furnished with slats to retain the apples and admit the passage of the air through them, and then open his cellar door and allow the cold air to rush in upon them. By this means his apples were kept until April, in as good condition as when put in in the fall—sound, bright, and of good flavor, though perhaps a little shrunk. Apples should be kept very cool. He considered Baldwin apples the most profitable crop which the farmer could raise.

Mr. FRENCH, of Braintree, said it was known that fruits had their years of sickness and depreciation. We know that the buttonwood has been dying out for ten years; but this year we find buttons growing on the trees, and young buttonwoods growing up. We have undoubted evidence that the "Pomme Appi" apple has been in existence for a century and a half, and he had no tree on his farm that was so hardy and bore so well. There are springing up before us, every day, new varieties of fruit, and the only difficulty is to know what we shall do with them all. In Philadelphia, lately, he was shown more than forty new varieties of apples, and all of them desirable. We do not want more than thirty varieties.

Mr. BROWN, of the *N. E. Farmer*, said he had no doubt we should always have plenty of new varieties, and described one variety of apple which had its origin in the town of Concord, and is principally confined to that locality, where it is extensively cultivated. It is called the HUNT Russet; he had seen some of them which were two years old, still juicy, fair, and retaining their flavor.

In regard to the time for trimming trees, it was his opinion that it should not be done while the sap was in full flow. He considered the practice which extends throughout New England of pruning trees in March and April to be destructive to them. If the limbs are severed while the sap is ascending, it will continue to flow and run down the limb and trunk of the tree, forming a discolored line, which can readily be seen on noticing a tree thus treated. This sap, which is sweet at first, on exposure to the atmosphere, becomes extremely acrid and bitter, and acts as a poison upon the tree, eventually destroying it, as it flows out from the limb with every returning flow of the sap. Trees should either be trimmed when the sap is not in motion, or when they are full of young foliage, which will divert the sap from the wound to the leaves, and give it an opportunity of healing over.

Trees can be trimmed in midsummer without injury, or in the autumn, when in repose. If trimmed when the sap is not in flow, a green, smooth bark grows about the edges, and the wound heals up much better than if cut in any of the months when the upward current of the sap is free. It is the running sap that prevents the healing process. He also cited the practice of eminent horticulturists to sustain his views.

Mr. ADAMS, of Newbury, agreed with Mr. BROWN's views as to the proper time for trimming trees.

Mr. WHEELER, of Framingham, considered the matter very important. His experience had convinced him that the best time for pruning was when the sap was not in full flow.

Prof. NASH, detailed a plan for preserving apples. In the fall, place them in the garret, (the cooler the room the better) enveloped in fine sawdust, about a bushel and a half to a barrel, and a little apart from each other and the barrel. They will not freeze, thus protected, in the severest winter, and fruit which will not generally keep beyond January, will keep in good condition until April.

The hour of nine having arrived, the meeting adjourned.

NOTE.—The reports of agricultural discussions at the State House, give opinions for which we feel no sort of responsibility. This is also the case with communications which we publish. Many of them contain doctrines which we could not endorse; but we consider it fair that gentlemen shall have a hearing, and have no fears but their opinions, as well as our own, will be taken for all they are worth.

For the New England Farmer.

COMPARATIVE MERITS

OF THE TALL AND LATE AND THE SHORT AND EARLY KINDS OF CORN.

Our farmers hereabouts plant much of the tall growing variety of corn, which is often materially injured by the early frosts, and their reason for preferring it is, that the ear is larger, and they get a much larger yield to the acre (*provided the frost does not destroy half the crop*). The low growing variety of corn, if planted the last of May or first of June, ripens earlier, escapes the frost, and although the ear is smaller, gives a sure crop. I wish to know if an equal number of bushels of the small and early variety may not be produced to the acre by planting the rows of the low and early variety nearer together than the usual three feet apart distance of the tall kind. (a.) The low growing corn probably does not extend its roots to such a distance as the taller corn. But our farmers say if the rows are nearer than three feet, the passage of the horse and whiffletree with the cultivator, will destroy by breaking down a large amount. But is it not bad policy to pass with the cultivator when the corn is high enough to be broken down, on account of injury to the roots!

(8.) Or at least, is it not better to use the hoe, than the cultivator, at such a stage of the growth, if thereby we can place six rows of short corn where otherwise we must have but four? I planted the last season an half-acre with the low growing variety. My men had planted the first three rows, each three feet apart, contrary to my intentions. The remainder was planted in rows two feet apart. The yield was 98 bushels (in the ear;) 16 of which were pig corn and 82 good sound corn.

L. S. H.

Northampton, March 1, 1853.

REMARKS.—(a.) We have known some of the largest and best crops of corn from the eight rowed Canada kind. (b.) The cultivator can scarcely be used too freely in the early stages of the corn plants; but when it has grown tall enough to be broken down in cultivating, the roots must have formed a net work over nearly the whole ground. Cultivating, then, cannot be beneficial.

For the New England Farmer.

INFLUENCE OF NEWSPAPERS.

MESSENGERS. EDITORS:—Newspapers wield an influence which controls nations, not by brutal force, not by the din and smoke of war, nor the arbitrary mandates of a despot, but by a still, impulsive power, which permeates the mind for good or for evil; they exert as great if not greater influence over the public mind than all the orators of the professions as moral or immoral agents. Newspapers conducted by good, well-informed, high-minded editors, will disseminate, in the public at large, as much useful knowledge and as much moral principle, I believe, as our schools and colleges. We can all discern the difference between those who read the productions of good liberal minded editors, and those who read scurrilous party papers, by their elevated conversation. A bigoted editor will propagate bigotry, a vicious one vice, a demagogue deception, an infidel skepticism, and the libertine will propagate licentiousness, and so on to the end of the catalogue of influences. There is no necessity of party individuals being bigots; charity covers a multitude of faults; "we may agree to differ" in a gentlemanlike manner, without those rancorous, uncharitable feelings, which add nothing to the items which constitute happiness, but rather infringe upon the good rules of Christianity.

In a community where there are individuals who will traffic away their own souls and the souls of others for lucre, we have reason to fear the worst of consequences from the circulation of licentious, immoral and youth-corrupting newspapers. There are no kind of wicked propensities in man but what can be accommodated with a creed from an unprincipled editor whose influence, Bohon Upas-like, poisons all who venture within its atmosphere, and whose only idea is to get money without regard to means or consequences.

Farmers and mechanics are daily reaping benefits from the instructions which they get from reading newspapers conducted by good, scientific, and judicious editors. But few, comparatively, would know the improvements which are yearly taking place in agriculture and the mechanical arts, were it not for this channel of conveyance. Many a

man gains knowledge from a source, unconscious from whence he derived it, and of course is unable to render "honor to whom honor is due." Some of the editors of our political papers, in their party zeal, make an impression upon the minds of some of those who read them, not at all favorable to the prevalence of brotherly love in the community. The mischievous effects of persecution for honest political opinions, are felt in every neighborhood; if the authors of these offences are not rewarded sooner or later, justice must have strayed away from home.

Intelligence seems to spread and enlighten the people in a nation in proportion to the freedom which is allowed by government to the circulation of the thoughts and opinions of each other by newspapers; look at the laboring classes in despotic Europe, where a paper is not permitted to circulate without passing the censorship of a government tool, and see the difference between them and those living under the liberal governments of England, the United States, and all other liberal governments. Under despotic rule, ignorance is the huge chain which binds the people to servitude; when that chain is once sundered the despots tremble in their shoes for consequences: there is no chain strong enough to bind a virtuous and intelligent people. Let farmers, mechanics and all people who are dependent upon their wits and hands consider well their situation and responsibilities, and let them discourage vitiating publications from entering their doors, to do more toward corrupting youth than all the clergy in the community can counteract.

The impressions made on the minds of youth are enduring and hard to eradicate, whether the impressions are made by reading contaminating publications or associating with filthy brained rowdy companions; many a parent has found to his sorrow that as the "twig was bent the tree was inclined," while making a desperate attempt to reclaim an incorrigible son, that had been neglected while young, without success.

In making a selection of newspapers, the man who would "train up a child in the way he should go" will see the importance of selecting those which will have a tendency to exalt and purify the mind, instead of corrupting and debasing it by sowing the seeds of pollution broad cast in the public, to bring forth their fruits by producing a generation of ill-bred juveniles, qualified to enter the ranks of street rowdies and public plunderers, rather than gladden the hearts of their parents and prove useful members of society.

SILAS BROWN.

Wilmington, 1853.

U. S. AGRICULTURAL SOCIETY.—We understand that the people of the State, and particularly of this vicinity, are taking strong hold of this national association. Numerous subscriptions of \$25, which constitutes a life-membership, have recently been made, and among those of a still broader liberality, there is a subscription of \$500, from the HON. JONATHAN PHILLIPS, of Boston. In all this we think we can see the untiring activity of the honored President of the society. We consider the institution as now established on a permanent basis; and that if its members imitate the

seal of its head, and harmony shall prevail in its councils, it will be the means of shedding untold blessings upon the nation and world.

BONES FOR MANURE.

To A. S., *South Freedom, Me.*—"Where can I get sulphuric acid to dissolve bones? (a.) What is the price? (b.) What quantity is needed in proportion to the bones to be dissolved? (c.) Do you think it would be profitable to purchase acid to dissolve all the bones I can get?" (d.)

REMARKS.—(a.) You can procure sulphuric acid in any quantity at the drug store of CHARLES H. BADGER & Co., 47 and 49 Blackstone Street, Boston.

(b.) By the carboy, containing 150 to 200 gallons, 2½ cts. a pound; it weighs about 16 lbs. to the gallon. In small quantities it would come a little higher.

(c.) Get a box made, say 6 feet long by 2 feet high and two or three wide, dove-tailed and jointed with white lead. Put in the water first; then the sulphuric acid, allowing one-half more bulk of water than acid, and one-half less weight of acid than bones; that is, to a gallon of acid, allow a gallon and a half of water; and to 100 pounds of bones, allow 50 lbs. of acid. Then add the bones finely broken up, and mix the whole intimately and equally. Cover the box with a lid or old sacks, and let it stand, *untouched*, 48 hours.

This method of dissolving bones is given in the Transactions of the Highland and Agricultural Society of Scotland, for 1851, and is the simplest and easiest with which we are acquainted. It is recommended by some that when the dissolving process has been gone through with, that the mass be thoroughly mixed with dry ashes before being applied to the soil.

(d.) We do—because the bones are exceedingly valuable, and the acid is also a fertilizer in itself. But make careful and exact experiments, in a small way, to begin with, and tell us the results of your experience.

While speaking of this subject, it may be proper to add that sulphuric acid is invaluable for many purposes, and is coming into common use, particularly among English farmers. It used to cost some seven or eight cents a pound, but since the introduction of platinum receivers, in which it is manufactured, a great reduction in price has been effected, notwithstanding these receivers cost about \$5,000 each. The production of crops removes the phosphate of lime from the soil—bones dissolved in sulphuric acid produce this phosphate, and the phosphoric acid so produced has been brought to bear upon the land with most beneficial effects. Professor LUXIE gives it as his opinion, that the commercial prosperity of a country may be estimated by the quantities of sulphuric acid it

consumes; and Mr. PUSEY, M. P., declared in a lecture on it, that he considers it no inadequate criterion of the degree of civilization. However, that is pretty much like many other things introduced. There is scarcely a greater indication of a high degree of civilization than the immense quantities of cotton cloth used in the country,—and certainly, no one thing adds more to the comfort of our people. In *Wiley and Patnam's* edition of *Liebig*, page 184, it is remarked that INGENHOUS proposed dilute sulphuric as a means of increasing the fertility of the soil. This is mentioned to give force to our reply, above, under letter (d.)

Sulphuric acid comes from sulphur and oxygen, one part or atom of the former, and three parts or atoms of the latter. It may also be obtained in a solid and dry state. STOCKHARDT says that what iron is to the machinist, sulphuric acid is to the chemist, and that it stands, as it were, the Hercules among the acids, and by it we are able to overpower all others, and expel them from their combinations.

THE PICTORIAL FIELD-BOOK.

This rich quarry of historic wealth is now in completed state, accessible to every American, and certainly every American should dig in its ample mines. Mr. Lossing has come to the rescue at the right period. Ten years more and it would have been too late. Every year or month was sweeping away some tenement around which gathered revolutionary associations, some ancient record or furrowed face, and which soon would have been lost forever to the world, but which are now securely embalmed by the pen and pencil of this artist-author. Our countrymen were so absorbed in the present, that they were forgetting the past. Progress was striding over our ancient battlefields, regardless of the bones that bleached beneath her feet. Agriculture drove her remorseless coulter through the mossy ramparts that once sheltered the gallant heroes of our liberty. The time-honored structures that kept off the dew and the rain from many a patriot head, were tumbling indiscriminately before the blows of that improvement, which would destroy an association as ruthlessly as it would crush a weed. The mound, the wall, the ditch, that had witnessed the intensest suffering, the bravest endeavor, the most heroic defences and assaults, over which the whistling balls had cut the air, and almost yet echoing with the clang of battle and the shouts of victory, were yielding to friendly strokes what they refused to hostile arms, and surrendering their ancient forms to the desecrating plow. Why should they longer remain to remind a people of the struggles their freedom had cost? Wheat would not grow in the ditch, nor corn spring out of the wall. And in a country so crowded for room, hitting its elbows against the oceans as it turned round on its narrow base of sixty degrees of latitude, it could not afford to let an old tree stand, though its rough bark held the testimony of a terrible conflict, nor permit the remnants of a venerable fortification to mark to the eye of posterity some spot hallowed with patriot blood. Rapidly, rapidly were these glorious mementoes disappearing before the utili-

tarian spirit of the age, and oblivion would soon have rolled her waters over them all. But the time so often gives what its necessities require. A historian of a new stamp appears as he is wanted; not confining himself within the four walls of a library, nor satisfied with collating, in new forms, the researches of others, he sallies forth to a personal inspection of every scene of revolutionary interest, he searches out the hoary actors that yet remain; he follows their tottering steps over fields of slaughter; sketches the physical features that were connected with the contest; and as his pen takes the narration from the trembling lips of these venerable partakers and witnesses, and transcribes their mouldy documents, his faithful and ready pencil transfers their features and figures to the enduring page. Thus we have fac-similes of the autographs of Washington and Jefferson, of Columbus and Cotton Mather, of Uncas and Brant, of Burgoyne and Gates, of Arnold and Andre, and of most of those stern men whose shoulders upheld the ark of our liberty. Thus, too, their lineaments look out from these life-like pages, and even the deep wrinkles that a century had worn in the cheeks of old John Battin, and the frosts that time had sprinkled on his locks, revealed the truthfulness of the artist's skill. The benignant features of Pocahontas beam with affection, and the countenance of Kosciusko and Lafayette, of Montgomery and Putnam, Stark, Wayne, Mercer, Marion, Sumpter, and a host of others equally worthy of preservation, show the reader what cast of men led our armies to victory in the heroic days of the republic. Accurate maps of battle-fields, the monuments that gratitude has erected to the memory of our heroes, the habitations that were the scenes of stirring interest, are here truthfully depicted.

But for this, all would soon become vague; important localities, intangible; indefiniteness would conceal our consecrated places, and the roads enrimsoned by the bleeding feet of our warriors—their long marches and frosty bivouacs—would in many instances, become indistinct and legendary. Dates and localities are the eyes of history, through which its truths are made manifest and steadfast. As we read these clear and beautiful pages, we feel a sentiment of nationality glow in our veins, and look with honest pride upon those inflexible, upright physiognomies, and with melancholy interest upon those quaint old specimens of architecture that held the living, and upon those tombstones that protect and mark the sleeping-places of the illustrious dead. Our author does not believe that the antiquarian spirit should be devoted only to unfolding the mysterious ciphers that decorate the sarcophagus of an Egyptian princess, but he would seize those hieroglyphics of our past—these frail memorials, so swiftly crumbling into dust, and enshrine them on his ample leaves—the record, the evidence, and the illustration of a great and triumphant struggle.

Accordingly we see our historic pilgrim traversing and re-traversing the broad field of the revolution—touching at every memorable place—in trackless forest—amid mountain ridges—over fruitful plains—pursuing the devious windings of rivers—in thronging cities tracing the revolutionary relics, around which the multitude heedlessly tramped—in solitary walks hunting the footprints of our armies—suddenly performing some distant journey to save the impress of a fort or building about to

be defaced by sacrilegious hands, following wherever the progress of American story beckoned him—till, compassing more than eight thousand miles, and transferring from fading reality to perpetual forms, many hundred cherished scenes and portraits, he consummates his interesting narrative of more than fourteen hundred large and compact pages, and gives the invaluable contribution to the descendants of those whose deeds he thus nobly commemorates and preserves.

These volumes are, hereafter, to perform an important part in educating the people in the details of American history. Certainly no work is so well calculated to lure the minds of the young through the different stages of the great drama of our independence. Uniting the two attractions of engaging narrative and pictorial representation, it interests the reader in a double sense, and will tend, we do not doubt, to imbue the generation now rising to manhood, with a deeper and fuller knowledge than it would else have had, of the labors, hardships, dangers and triumphs of the first sons of the republic.

In the modesty of his preface, the author regrets that others, more competent, had not gone forth to this undertaking. But he is the competent man who does the work; and surely no one could have accomplished it with greater fidelity, truthfulness or skill, infused more freshness and vivacity into the current of his narrative, or poured out the enthusiastic devotion of a more thoroughly American heart. It was a task that indifference could not achieve. It required not merely the determination to write a book, but also the promptings of an ardent desire, a burning love of country, familiarity with her history, and an irresistible impulse to gather and preserve whatever might be the subject to demolition or decay of all those things that could throw light upon, or that became memorable in the progress of this country from dependence to freedom. The patriotism that thus sacredly collects, guards and perpetuates the proof of American valor, is of the stamp that would perform deeds, themselves worthy of record, when the time requires.—*N. Y. Daily Times.*

TREATISE ON MILCH COWS.

Some years ago a book on the subject of milch cows appeared among us, written by a Frenchman by the name of Guenon. It was translated, we think, by Mr. SKINNER, late editor of the *Plew, Loom and Anvil*. This book proclaimed a theory which was then new to most of us, and to which Mr. Skinner assented. The theory briefly is this; that

"The hair of the horned cattle, as is well known, grows downwards, only in the milk mirror which begins at the udder, the down-like, delicate, short and lighter-colored hair grows upwards; and where the ascending and descending hair meet, they form an elevated stripe, a vortex or whirl. This whirl is the real frame or border of the milk-mirror, and gives it its shape. This shape is the principal mark of the productiveness of the cow. One shape shows a greater productiveness of milk than another."

The work has recently been examined and compiled in a condensed form by JOHN NEFFLIN, a

German farmer, who has had many opportunities of developing the nature and character of Guenon's observations. Prof. WILKINSON, late of the Mount Airy Institute, says he is satisfied that this is the only reliable system by which cows can be selected. The circular of the publisher states that a thorough understanding of the system, will enable the farmer or dairyman to determine not only the daily quantity of milk a cow will yield, but how long this yield will continue. Again, it is susceptible of application to calves of three months old, so that the breeder can determine, even at that early age, which promise to become good milkers, and which do not. And again, as the marks can be discerned in bulk calves as well as in cows, the important information is secured to the farmer, which enables him to couple such male and female animals, as belong to the same class, and thus increase their productiveness for the dairy, to the utmost possible extent. The breeder, by a proper application of the rules, may so improve the character of his stock, as to double its value.

The work is printed handsomely, with a large plate illustrating the principles laid down. Price 30 cents a copy, or 50 cents each for bound copies. Published by C. B. ROGERS, 29 Market Street, Philadelphia. Circulars describing the work will be handed to persons calling for them at this office. We believe the matter worth attending to.

For the New England Farmer.

DUNGING IN THE HILL.

Dunging corn in the hill appears to me an injudicious method of applying manure, even when the quantity is small. It gives to the plant a luxuriant start, provided the manure is rotted, but too often proves of little value afterwards. The small fibres of the roots are the mouths of the plants through which the food passes to the stock. If we examine the roots of corn we shall perceive that they extend as far in the ground as the stocks do above. Hence it will be perceived that the dung, if placed in the hill, cannot benefit the roots nor materially the plant, after they have extended beyond the circle where it is deposited. Whereas, if it is spread and buried in the soil, it benefits them in their whole extent; there probably not being a square foot of ground in the field into which the roots do not penetrate in search of food. And for the next crop, it benefits only parts of the soil where the corn has grown. I have noticed that in the next crop, which is usually wheat in this section, I can see where the rows of corn were last year; therefore I think it would be better to spread this manure and plow it in.

If we wish to give corn a luxuriant start, we can make some kind of compost to use in the hill. It is stated that phosphate of lime, or bone dust, will furnish the necessary elements of the whole plant without the aid of much if any other manure.

And now, friend Brown, I want to know if gypsum or plaster, saturated in urine, dried, pulverized, and put in with the corn in the hill, would be any benefit, or would it kill the corn?

Last year I used hen manure mixed with plaster, by putting it in with the corn, but found that it hurt the corn, as it did not come up well. This year I intend to make the same mixture, and apply it after the corn is up.

Your friend, B. T. CONANT.

Lyme, N. H.

REMARKS.—The bone dust will not be a sufficient manuring in itself. Your saturated plaster will be excellent in the hill, intimately mingled with soil before dropping the corn.

For the New England Farmer.

AGRICULTURAL PREMIUMS.

The question, I notice, is asked, whether the present system of disbursing premiums may not be improved. I have often thought it questionable policy to confine premiums to successful experiments or results. Is it not as important to avoid the evil, as to pursue the good, in all departments of life? Light-houses are built on dangerous points. Charts point out the rocks on which vessels have foundered, as well as the deep water, where they may ride in safety—the shoals and quick-sands, as well as the harbors. The historian would ill perform his task who should dwell upon the causes of national prosperity, and omit all notice of those which brought about its decline and ruin. To the prudent man, the knowledge and study of the means of success are scarcely more important than those of failure.

In former numbers of the *Farmer*, accounts of great success in raising and selling milk, by farmers near Boston, have been published—accounts representing men as realizing \$100 a year from each cow. Lately a Mr. Marsh, of Cambridge, is reported as having stated in the "Convention of Milkmen and Farmers," that "In four years he lost in the milk business \$1000." Would not a premium to Mr. Marsh, not exactly for his failure, but for a detailed statement of the whys and the wherefores of the result, be a good investment? I think so, and have said thus much by way of suggestion to those who manage premiums.

Winchester, February, 1853.

S. F.

For the New England Farmer.

PEARS ON THORN STOCKS.

The present system of dwarfing fruit trees, which is said to be applicable to the pear as well as to other varieties of cultivated fruits, removes, in a great measure, the objections urged against the thorn, by nurserymen. It has generally been asserted, and no doubt truly, that while the scion of the pear does remarkably well, and makes a rapid growth on the thorn, the latter is not large enough to secure a good sized and healthy tree. But in dwarfing, the size is a secondary consideration. Very productive trees are obtained by this method, and they are very generally preferred in consequence of their being less liable to injury from winds, more easily managed, and requiring far less ground. Thorn stocks, also, are easily obtained, whereas quince stocks and pear stocks are expensive, and obtained only with difficulty, and from a distance, of those who grow them for sale, and an exorbitant price.

H. D. W.

VICAR OF WINKFIELD.

The pear of which the above engraving is a portrait, grew in the grounds of Col. WILDER, of Dorchester, and was presented us for the especial purpose to which we have devoted it. Downing's account of it is, that it was discovered as a natural seedling in the woods of Clion, France, by a French curate, whence it obtained the name of *Le Cure*, or *Monsieur le Cure*. It was afterward imported into England by the Rev. Mr. Rham, of Winkfield, and cultivated and disseminated from thence, becoming known in the neighborhood of London as the *Vicar of Winkfield*. It is called, therefore, in the books by each of the three names which are

given in italics. And by Kenrick, it is called *Chen*, after the name of the place in which it was found growing wild.

Different cultivators accord to it different merits. Mr. Downing says that with him it was always large, fair and handsome, and a first rate baking pear; occasionally fine as a table pear, but generally astringent and only third rate for this purpose. Its great productiveness, hardiness, and fine size, will always give it a prominent place in the orchard as a profitable, market, cooking pear. The tree grows thriftily, with drooping fruit branches. Shoots diverging, dark olive.

THOMAS, in his *Fruit Culturist*, speaks well of

it; says it ripens late autumn and early winter, for about three months, and is *fine on quince stocks*. Its neat and uniform productiveness, its fine qualities for cooking, and the long period of its continuance, render it eminently valuable.

BARRY, in his *Fruit Garden*, says the tree is a most vigorous grower on both pear and quince; and on the latter makes a beautiful and productive pyramid; and that it is one of the most valuable of all late pears. Ripens well in the cellar.

COLE, in his *Fruit Book*, says, as it is hardy, a great grower and enormous bearer, the fruit large, fair, and it comes in when pears are scarce, it is one of the most profitable for the market or home consumption. Requires a warm location, and a long warm season.

Very large, long pyriform; pale yellow-brown, full in the sun; stem $1\frac{1}{4}$ inches long, slender, obliquely set without cavity; slight basin; flesh greenish white, juicy. Excellent for cooking.

AGRICULTURAL MASS MEETING.

The mass meeting of the farmers of Middlesex came off on the 10th, to the entire satisfaction of all concerned. We went to bed on the evening of the 9th, with a cold, drizzling rain falling around us, and feeling that our prospect for the next day was dark and dubious. But Providence was better to us than our fears. The morning sun rose fair and bright, and his cheering beams warmed all our hearts. At the appointed hour, the active, stout-hearted and intelligent farmers of Concord and the neighboring towns began to assemble, and took hold of the business of the day as though they had come for a day's work, and meant to do it, too. They were cheered by the presence of several distinguished friends of agriculture from different sections of the State and from other States. All the services of the day were of a highly interesting character. Indeed, the interest was not only sustained, but increased from hour to hour, until 10 o'clock in the evening, when the meeting broke up, amidst the universal regrets that we had not another day to spend in the same way. Not an unpleasant circumstance occurred to mar the pleasure of the day. Universal good feeling prevailed. We had a good dinner and it is not enough to say that we had a pleasant time. We had a *good* time—a *grand* time. It was a proud day for the Concord farmers and a proud day for old Concord. And we trust that many of the towns in our State will have just such a time this very spring, and every spring for years to come, and when they do, "may we be there to see."

The meeting was called to order by ELIJAH WOOD, Jr., Esq., and organized by the choice of SIMON BROWN, President; Maj. B. WHEELER, Framingham, and Col. HEARD, of Wayland, Vice

Presidents, and Dr. JOS. REYNOLDS, Secretary. The doings of the Concord Farmers' Club, at their two last meetings in which this Convention originated, were then read by the Secretary.

The throne of grace was then addressed in a very appropriate manner by Rev. L. ANGIER, of Concord. The President made some remarks explanatory of the objects of the meeting. Letters were then read from A. W. DODGE, of Essex, W. S. KING, of Providence, Editor of the *Journal of Agriculture*, Prof. J. G. HOTT, and J. T. GILMAN, Exeter, and from C. L. FLINT, Secretary of the Board of Agriculture, expressing their regret at being unable to be with us, and giving us words of cheering and encouragement.

The subject of farm buildings was then taken up: WM. D. BROWN, of Concord, read an essay full of wit, humor and instruction, in which he described minutely the size, construction and arrangements of Farmer Goodman's barn. The essay was full of useful hints and suggestions.

The subject of neat stock was then taken up, and occupied the remainder of the morning session. SETH SPRAGUE, of Duxbury, President of the Plymouth County Agricultural Society, made some very interesting statements upon this subject. He said that a great difficulty with us is that if we have a good animal, we are not sure of getting another. The English farmers regard the milking and flesh-gaining properties of their stock. They use horses principally for the draft, so that working oxen are of less importance. They have succeeded admirably, and they are certain of success in getting the kind of stock they desire. Our native cattle have mixed blood in their veins, and we know not how to cross and mix them.

We need to purify their blood. We must pay great attention to the character of the males if we wish to improve the quality of our stock. We must have pure-blooded males. A stain in the blood from any strong-blooded, vigorous race, will shew itself for many generations, and oftentimes will be strongly marked, after its origin is forgotten. As an illustration of this, he said that the Galloways or hornless cattle were introduced many years ago into this country, and now we occasionally find a no-horned animal in our herds, when its parents, grand-parents and great-grand-parents all had horns. Mr. S. thinks the Durhams the best for milk and beef, where the feed is rich and abundant. Alderneys or Jerseys are now being imported. Their milk is very rich and they make an abundance of fine butter. But they are small, and not very hardy; what the result will be from them is uncertain. He has found that the Durhams, the Ayrshires and the Devons all take flesh much better than our native stock. He thinks that the same keeping that will make three lbs. of flesh in native stock, will make four in any of the above kinds.

GEO. M. BARRETT, of Concord, said he had had some experience in the breeding of stock, more especially of the Ayrshire. But his experiments have not been continued long enough to determine its absolute value. His present impression is, that they will prove the best for milk. Ayrshire cows have short teats, and sound, compact bags. Where they have one-quarter native blood, they have good sized teats.

Maj. B. WHEELER said he had had some experience in raising stock. Durhams, he thinks the best for beef. They are large, hardy, and take fat easily. If the object of the raiser was to get cattle for beef, he would recommend Durhams.—But he has not been successful in getting great milkers from them. The Ayrshires he thinks fine milkers. The only objection is their small teats. The Alderneys give very rich milk, but they are not hardy, and within his observation, they are apt to be poor.

Col. HEARD, of Wayland, keeps seven cows and always raises his own. Selects from his best and takes them to the best bull he can find. His cows have been mostly natives, but he has had some very good ones. Some 15 years ago, he and one of his neighbors purchased a bull, half Ayrshire, and kept him for the use of the neighborhood, and the result has been, that the stock has been a good deal improved. He thinks the Devons are very hardy and keep in flesh well through the winter. Ayrshire cows make more butter, and the butter keeps better than that from other cows.

The President made some inquiries respecting abortion in cows. This is becoming a very common occurrence and a serious evil. He inquired if any one could assign a cause for this?

Several gentlemen observed this had frequently happened within their observation of late, but assigned no reason for it. Mr. SPRAGUE said that in his county, the butchers found the calves in a certain neighborhood were very fine, and they were willing to pay from fifty cents to a dollar more for them than for other calves, and this was found to be the result of the introduction of a certain bull into the neighborhood. This was a matter of no small importance. In England the breeding has been carried on by the best males. He referred to the practice of breeding in and in; an idea prevails in this country that this deteriorates the breed. In England a different idea prevails, and it is by this mode that the Devon Stock has been especially improved.

Mr. AMASA WALKER had nothing to say but what he had said before upon other occasions.—We talk about native stock and foreign stock. But it was all one stock. The only question is, which has been longest in the country. Our fathers brought the best stock they could find. Other stock has been imported since. But we cannot re-produce stocks imported, any more than we can

breed Englishmen. Although we are from the same stock, we are not Englishmen. Under the different climatic, dietetic and social influences we are very different from Englishmen. We are less muscular and more active and nervous. We are now importing largely the muscled of Englishmen and Irishmen to labor for us. We have brains enough, we do not need to import them. Our object must be to improve our stock by crossing. The raising of foreign stock is usually very expensive. It will do for amateur farmers. He has a fine pair of oxen. He knows none finer, three-fourths Durham,—but they have been very expensive. So of some cows he has had. They were fine cows, but expensive. He has one small native cow that cost much less, and costs much less in keeping; but she gives milk of fine quality and in large quantity and his women tell him that she is the best cow he has. Select such cows and breed from them by crossing and we shall get good cows.

Mr. SPRAGUE did not agree with Mr. W. He thinks it very important to have good blood. If we get a good cow from such crosses as Mr. W. referred to, it would be accidental. We were not sure of it. Purify the blood, is a fundamental principle in stock breeding.

Mr. SMITH, of Lincoln, said if we select the best native stock, and cross with imported—we can improve the stock. He has seen this demonstrated in the case of what is called the Prentiss stock in his neighborhood. Mr. LEWIS, of Framingham, said he was surprised to hear it said that it costs more to raise foreign stock than native. He thinks this is not true except in the case of Durhams. He has an Alderney that yields one lb. of butter to 6 quarts of milk. Now, he mixes her milk with that of his other cows and gets 1 lb. to eight quarts. It usually takes 10 quarts to a lb.

Mr. BROWN said that the cow that makes the most butter, will not always make the largest calf.

Dr. REYNOLDS thought the cow that gives the richest milk would make the fattest calf. Fat oil, of which butter chiefly consists, will make fat, but not bone and muscle. The caseine which abounds in curd, contains a large amount of nitrogen. This is essential to the formation of muscle. Hence milk that yields the most cheese will make the largest and most meaty calves, but not the fattest.

Mr. FRENCH, of Exeter, was a believer in blood. He said we were in the habit of importing into this country live stock from the coast of Africa with black skins and curly hair, and he would inquire how long it would take if it was bred in and in to change it, in this country into red skin with long straight hair. He thought it would take some time to run out the blood. You can no more get a Durham from a Devon, than an Indian

from a negro. The marks of the Devons are fixed and permanent. The Durhams are nearly as much so, but the Ayrshires are not so well fixed for they have not been distinct races so long. Why not breed from good native stock? Because you are not sure of a good progeny. He related an instance in his own experience to prove this. We must find the stock that has the qualities which we desire in the greatest degree, and breed from that.

Mr. J. B. FARMER, of Concord, said his grandfather always raised his own stock from his own bulls, and he thinks that his stock deteriorated. One spring he had nine calves, seven of which were idiotic and good for nothing. He thinks raising in and in not a good practice.

Mr. HEARD said that old cows gave to their progeny their own marks more strongly than young ones.

Prof. NASH, of Amherst, said he had but little experimental knowledge upon the subject.

But he would make one inquiry. It is conceded that it is important to take the cow to a good bull. He believed that opinion true. His inquiry is the following. Is not the cow herself deteriorated by taking her to a mean animal? If you take a fine mare to a mean animal, she deteriorates from sympathy with the male. Is not the same thing true of the cow?

Mr. ROBINSON, of Dorchester, said he was not much acquainted with raising stock. He keeps stock for their milk. He thinks the care of stock of more importance than the breeding. This matter of the care of stock is of infinitely more consequence than is usually imagined. If he were to give an opinion upon the comparative value of different breeds he would say the Ayrshires, were the best for the dairy and the Devons for the plow.

Dr. RAYNOLDS said the crop of hay last year was small, and he presumed it had led to experiments in feeding stock. He would inquire the results of experiments upon cutting hay, the present winter. Mr. GLEASON, of Wayland, thought the quality of the hay last year was better than usual, and although the amount given to stock has been less than usual, he thinks stock in general is coming out well this spring. He does not think much is gained by cutting hay. But he thinks all feed should be wet—as to raising stock, it costs more to raise than to buy, but we are more sure of good stock. Take a cow that is a good milker to a bull that came from a good milker and you are almost sure of a good milker.

Mr. SPRAGUE made some remarks upon the importance of taking better care than we usually do of our calves and young stock.

Dr. BARTLETT, of Chelmsford, said that the subject of feeding was of more importance than any other in relation to stock. He uses apples very

freely in feeding young stock, and he thinks, fed in this way, they will do better than on roots and hay. Corn fodder he uses extensively, sows Southern flat corn broad cast, very thick, that the stalks may be small, and he thinks, pound for pound, it is worth more than English hay. He sows in July for winter feeding, and early for summer feeding. Salts it in the mow, and cattle prefer it to hay. He gives apples to his milch cows, and thinks them excellent food. He would freeze and then thaw them and immediately feed to the cows.

Maj. B. WHEELER has used apples as food for cows, for thirty years, very successfully; values them highly for this purpose.

At this stage the meeting adjourned for dinner. One hour was spent in discussing the good things of the table. The farmers then returned promptly to the hall, and the subject of *Plows and Plowing* was called up. Several plates were arranged on one side of the hall exhibiting various patterns of plows, ancient and modern. Explanation of the plates, with remarks upon the improvement in the structure of this most important implement in the cultivation of the soil, were made by the President.

The next subject called up was *Agricultural Education*. Mr. WALKER addressed the meeting in a most interesting and eloquent manner. He said this subject was arresting the public attention more strongly of late than ever before. He took the ground that every farmer *should* understand the science of his profession, and that he *can* understand it. The physician who does not know why he gives a certain dose of medicine, is not entitled to, and does not have our confidence. The farmer has more to do with the laws of nature than any other profession. If he is guided by tradition it is a very uncertain guide. The farmer has to do with fifteen elementary substances, and he must act in conjunction with the laws of nature, in effecting their combination and decomposition. He then named and described these elements viz., oxygen, chlorine, sulphur, phosphorus, silicon, hydrogen, nitrogen, iron, manganese, potassium, sodium, calcium, magnesia and alumina. The farmer ought to understand geology which teaches the nature and composition of soil and rock. Soil is made mainly of decomposed rocks. Rocks are divided into stratified and unstratified, aqueous and igneous, those that have been deposited by the agency of water in strata, and those that have been deposited by the agency of fire not in strata. He then spoke of the constituents of rocks. Granite contains a large amount of potash. It contains soda, lime, manganese and iron. Pulverized rocks manure the soil and repair its waste. When we learn to pulverize rocks readily and cheaply, we shall have the very manure we want for some soils and for some crops. We want to know the composition of vegetables that we may

adapt them to our soils, that we may furnish to our soils the elements needed in raising any given crops. This then, is a matter of practical utility. We want to know the comparative value of manures. In order to do this we must know the component elements of different manures, and to know how to combine and to preserve manures. How to fix their volatile elements. There is hardly a farming process carried on by the farmer or his wife that is not a chemical process, and they can be carried on better when they are understood. Butter-making is an example of a purely chemical process. Butter is oil which in cream is contained in little bags, covered with caseine or cheese; at a low temperature, you cannot break these bags to get at the oil, by any mechanical force. But at 60° Fahrenheit by constant stirring and thus bringing them into contact with the oxygen of the air, these little bags will burst, and their particles of oil will run together and accumulate into lumps. Butter must be worked as long as the caseine comes out. The object of working is, to get clear of this caseine, which will soon putrify and become rancid. Must not be worked too much or you will work out the sugar, which gives its sweet flavor to butter.

His second proposition was, that every farmer can understand the science of his profession. A few years ago this could not be said. But the science of agriculture has been simplified like the science of geography, so that every one can understand all that is essential, in a few months. He would advise every young farmer to go to studying, and to persevere until he masters the subject, so that when he reads in the *Farmer* about phosphates, and carbonates, he may understand what he reads. He spoke of the *Progressive Farmer*, a book that costs but 50 cents, and has been prepared with great care for the use of those who desire simple, practical information upon these subjects. He advised young men to form themselves into classes, and pursue the study. The whole lecture was intelligible, instructive, and highly interesting, and we want a hundred such in the State the present year.

The subject of root crops was then called up. WM. D. BROWN spoke of carrots, turnips, &c., raising, storing and feeding them. He stated that when, a few years ago, the landlords in Scotland raised the rents, the farmers went into the raising of root crops, and paid their rents with the avails of their crops easier than before.

MAJ. WHEELER said it costs but little more to raise carrots than corn, if we manage right. The ground should be plowed deep, and sowed about the middle of June. As soon as the carrots show themselves, they should be hoed, and then frequently hoed, and they will require but little weeding.

MR. SPRAGUE said turnips are a great crop in England. They sometimes get 40 tons to the acre. The climate and soil suit them. We cannot raise them in such abundance in this climate—six or eight hundred bushels is as much as we can expect. He has raised 1600 to the acre. We probably expect too much from them. The English do not expect so much from them. He thinks ruta-baga the best kind of turnips—more easily raised than carrots. Salt hay alone is poor food for cows, and turnips are poor food for cows; but give them both together, and they are very good food. He is fattening two cows upon them at this time. We can raise turnips at from six to eight cents per bushel; at this rate they are good food. Cattle feeding upon dry hay, do better for some succulent vegetables.

MR. COMINGS, of Mason, N. H., followed in some interesting remarks upon feeding stock.

HON. J. W. PROCTOR did not arrive until after 5 o'clock, P. M. He closed the afternoon session with some interesting remarks.

At the close of Mr. Proctor's remarks, the meeting adjourned till 7 o'clock.

At 7 o'clock returned to the hall and met a brilliant assembly of farmer's wives and daughters, blooming and intelligent. At half-past 7, MR. H. F. FRENCH, of Exeter, N. H., commenced a lecture which continued one hour, and fixed the attention of the audience to the last. He spoke in a plain, simple and easy style, of the importance of science to the agriculturist, and of the embarrassments attending the pursuit of scientific researches; we must not expect too much of science, nor must we be deceived by the promises of those who are mere pretenders to science. We cannot do justice to this lecture without reporting the whole—one must have heard it, properly to appreciate it.

MR. FRENCH was followed by a lecture from PROF. NASH, of Amherst, upon the most important elements of manures. He exhibited specimens of Hydrogen, Oxygen, Chlorine, Carbonic acid, Ammonia, Carbon, Carbonate of Potash, Potassa, Potassium, Lime, Magnesia, and described them and showed their properties. He then spoke of the elements in animal manures, their action upon the soil and upon plants; how to improve manures and to fix their volatile elements, and various matters of great interest to the farmer. His remarks were very correct, and proved him to be thoroughly master of the subject which he undertook to discuss. The audience manifested much interest in all his remarks, notwithstanding the lateness of the hour.

Thus ended the experiment of a Farmers' Mass Meeting, and considering that it was an experiment and the first time it has ever been tried, it may be considered perfectly successful.

For the New England Farmer.

PRESERVING APPLES.

Take a tight flour barrel with one head, cover the bottom with *clean, dry saw-dust*, then a layer of apples, blow end down, not allowing them to touch each other or come in contact with the barrel, leaving a space on the outside of about one inch; cover one inch with saw-dust, then a layer of apples, &c., until the barrel is full, leaving about three inches saw-dust on the top. Put the barrels into a room without fire, or into a tight out-building, they will not freeze or rot; the places in the apples bruised by falling from trees, or otherwise, instead of decaying, will become like dried apples, and the balance remain sound.

Your ob't servant, GEO. B. GREEN.
Windsor, Vt., 1853.

GRAFTING.

The season is near at hand for performing this operation. Scions should be cut immediately and kept in a cool moist place. There are various modes of grafting, but a few of the best are sufficient for all purposes. We copy from Cole's Fruit Book, and believe the directions are sufficiently clear and precise for the direction of any who may have the work to do.

CLEFT GRAFTING is the most common. It is practised on large stocks and those rather small. In large stocks, an inch or more in diameter, two scions are set; this aids in healing over the stock, and keeping it sound and healthy; and when the scions interfere the second or third year, one is usually cut out. Sometimes both remain.

Saw off the stock with a fine saw, and pare smoothly with a sharp knife; then split the stock with the grafting-knife, and open it with the wedge on the same. Or a common knife and a wooden wedge may be used. Sharpen the scion on both sides, with a straight scarf like a wedge; let the scarf be about $1\frac{1}{2}$ inches long, more or less, according to the size of the scion and the splitting of the stock, making the scarf of the scion as long as it can be conveniently fitted to the stock. Large scions should have shoulders at the top of the scarf, else the stock would be split too wide. It is best for the stock to cover, or almost cover, the scarfs on the scion. The outer part of the scion should be slightly thicker, to make a close fit there. Leave two buds on the scion, setting the lower bud just below the top of the stock. Adjust the scion so that the joint between the bark and wood, in the stock and scion, will exactly correspond; this is important, as that is the place of union between them. This done, withdraw the wedge, and apply the cement or clay. In cutting scions, reject the but, as the buds start reluctantly or not at all, and reject the top also, as it is too soft, or may be winter-killed.

SCARFING THE STOCK.—When only one scion is set in a stock of moderate or small size, if the stock be scarfed off on the side opposite the scion, (as at *a*, in the figure,) it will heal over the sooner. We have grafted as follows with excellent success. With a drawing stroke of the knife, cut off stocks or small limbs, say from $\frac{1}{2}$ to $\frac{3}{4}$ an inch

in diameter, making the length of the scarf about 4 times the diameter of the stock; cut off the point or top of the stock down to about the thickness of the scion; (as at *b*;) then split the stock, shape the scion, and with a wide knife at the end, or blue point, pry open the stock on the scarfed side, and adjust the scion, which should be thicker on the outside. We have grafted in this way; and in the fall, stocks $\frac{1}{2}$ of an inch in diameter have been completely healed over, and so neatly in some cases, that we could not determine by their appearance whether they had been grafted. We prefer this mode; it is neat, expeditious, and successful. We have put good new tops on small standard trees, in one season, by grafting the limbs in this way, so that the change was hardly perceptible.

SPLICE OR WHIP GRAFTING. This mode is adapted to small stocks, and it succeeds best when the scion and stock are precisely of the same diameter. When one is larger, they should be matched precisely on one side. The stock and scion are scarfed off, about $1\frac{1}{2}$ inches in length, and by cutting downward in the stock and upward in the scion, a tongue is raised on each, (*a*, *a*;) which is fitted into the cut of the other. This is a very perfect and sure method, and stone fruit will sometimes take better in this way than in any other. Bind it very neatly with matting, and then apply composition; or better still, wind round composition cloth without matting. The cloth will yield in warm weather, as the tree grows, and is better than matting, as that will girdle the tree, if not loosened.

SINCE GRAFTING.—Make a T in the bark, as in budding; then cut out a small piece of bark crosswise just above the cut, that it may allow the scion to fit closely to the wood below. Scarf off the scion, as in splice grafting, commencing the scarf at a slight crook, if such there be in the scion, that it may stand off. Sharpen the point of the scion on the side opposite the scarf, cutting a little each side of the round part, that it may slide down well, then raise the bark as in budding, and press down the scion; if the upper part hugs closely to the stock above the cross-cut, press it to the stock where it is set in the bark, and bend the upper part off. Bind it closely to the stock, and apply composition. When the bark does not peel, the stock may be scarfed off a little, and the scion, formed as usual, fastened on. In this way, side limbs may be formed when there is a deficiency, and grafting done without cutting off the tree or stock.

CROWN GRAFTING is the same as side grafting, only instead of a cross-cut in the bark, the stock is cut off. It is adapted to stocks that are too large for cleft grafting. Or, after cleft grafting large stocks, scions are set in this way between the other scions, to keep the stock alive and promote healing, and they may be cut off for scions, and the others will cover the stock.

Saddle Grafting is but little practised. The

Splice Grafting.

Cleft Grafting.

Side Grafting.

stock is sharpened in wedge-form; the scion is split up in the centre, and each half thinned away on the inside to a flat point, and then set on the stock, with a good fit, at least, on one edge. It is most practised on stone fruit, and when the scion is immature.

Sometimes large stocks are grafted after the usual season, by splitting up the scions two or three inches, with one side the stronger. The stock is scarfed off on one side, and the stronger side of the scion is fitted into the bark opposite the scarf, and the thin part is brought down over the scarf, and the lower end inserted under the bark below the scarf. The thin part of the scion passing over the scarf promotes healing.

ROOT GRAFTING.—In the Middle States and the West, this mode succeeds better than in the North, where the seasons are shorter. Roots are cut into pieces of various sizes, from 3 to 5 inches. If large, cleft grafting is best; if small, splice grafting is preferable. Some apply composition, others omit it, as the root is covered in earth. The surest way is to apply it, but with omission it is generally successful. The better way is to have the roots accessible in winter, and graft the latter part of winter or early in spring, and set out the stocks in earth in the cellar, in boxes or not, until the ground is dry enough for setting out.

GRAFTING LARGE TREES should generally be done gradually, occupying 2 or 3 years, according to the size of the tree and manner of grafting. Graft the top first, as scions at bottom will not grow well while overspread by large branches. Leave twigs and shoots on the limbs, to sustain the limb till the scions grow, and then remove them gradually, but perhaps not till the second year. Many an orchard of large trees has been ruined by cutting off all the top at once, in grafting, exposing the trunk and branches to the hot sun, and giving a sudden check to the growth and life of the tree. But if the limbs are all cut off and grafted at once, towards their extremities, say where only an inch in diameter, and numerous twigs and little limbs are left, then the tree does not feel a shock, as the twigs and numerous scions soon form a good supply of foliage; and as the latter grow, the former are removed. Or graft limbs enough for a new top, where not very large, and remove the others in a year or two, as the scions supply their place.

Never graft an unthrifty tree; it is lost labor. First cultivate, prune, and wash, and put it in a vigorous condition.

GRAFTING COMPOSITION, AND ITS APPLICATION.—1 part good beef tallow, 2 parts beeswax, 4 parts white, transparent resin; melt all together, turn into cold water, and work and pull it thoroughly, as shoemaker's wax. This composition is not so soft as to melt in warm weather, nor so hard as to crack in cold weather; but it gives as the tree grows. It is of great importance to have it of a right temperature, and well applied, else it will peel off in cold weather. While warm, it should be pressed closely to all the wounded part of stock and scion.

☞ An ornamental tree society has been formed in Stoneham.

ROCKINGHAM COUNTY, N. H.

The farmers of old Rockingham held an agricultural mass meeting, at Exeter, N. H., on the 10th of February, which was "a starter." A large number of people were present. HENRY F. FRENCH, Esq., of Exeter, presided. "He stated the object of the meeting to be,—to adopt measures for the promotion of agriculture—to awaken a new interest in behalf of the association they had recently formed, and to arrange for a Fair in the autumn." Everything was propitious; on the 28th of October they had no organization—now they are organized, and at work with a fund of over \$1,500!—Prof. HORT, and Mr. FRENCH, of Exeter, ROBINSON, of Brentwood, CRAM, of Hampton Falls, CORRIE, of Derry, CLARKE, of Atkinson, BARTLETT, of Stratford, LEARNED, of Chester, SANBORN, of Kingston, and others, we learn, made capital speeches, interesting and instructive. The following resolutions were reported, and we believe adopted.

Resolved, That a National Bureau of Agriculture ought to be established.

Resolved, That our State Legislature ought to establish a State Board of Agriculture, appoint a State Commissioner, and make appropriations in aid of Agricultural Societies.

Resolved, That it is important to improve our present breeds of stock, by a cross with the best imported breeds.

Resolved, That the ladies be invited to enrol their names as honorary members of the Society.

For the New England Farmer.

CARROTS VS. ENGLISH HAY.

GENTS.—Annexed is an extract from a letter received from one of the best experienced farmers in the county of Worcester. His estimate of the value of carrots, as feed for stock, comes short of most others,—but not so much as appears on the first reading. Valuing English hay at \$20 the ton, Mr. BACOCK would value carrots at \$8 the ton. Generally speaking, they are placed at half the price of hay. Perhaps their true value will be found between *one-third* and *one-half* that of good hay—according to the purposes for which they are wanted. Mr. BACOCK's view of draining are worthy of much consideration. This is a mode of improvement but little practiced among us and less understood. I remember to have seen it very successfully applied, by Mr. COLMAN on his farm in Lynn, whereby the value of the land was increased *four fold*. What is meat for one, may be poison for another; so in directions for farming, circumstances materially alter cases. General rules cannot be applied without qualifications.

Very truly yours, J. W. PROCTOR.
Dartmouth, Feb. 16, 1853.

MY DEAR SIR:—Your favor of the 19th ult. came duly to hand, acknowledging the receipt of the Worcester County transactions, and saying that you had recently turned your attention to the culture of the root crops, for which I am glad, as I have no doubt you will add much that is useful to this important subject. Prof. MARRS is too sanguine in his statement as to the value of carrots. It is true, that a horse fed partly on car-

rots or any other green food, or even wetted hay, is less subject to heaves, than when fed on dry hay alone. It is not true that when a horse is fed in part on carrots, that shells of oats and pieces of cut hay will not be found in his dung. I have fed a colt this winter, (coming three years old) a portion of the time, on cut hay, with one peck of carrots daily, and a part of the time on cut hay alone, and can discover no differences in his excrement, it being equally chappy when fed on hay and carrots as when fed on hay only.—The statement that 50 per cent is saved, by cooking meal for hogs, is beyond my experience, which is not more than 25 per cent. saving in cooking corn, rye, barley, or oat meal, and 15 per cent. saving in cooking roots. You will find a statement of all I know as to the comparative value of good English hay, Indian meal, flat turnips, carrots, and good oat straw in my letter to the Worcester county societies' committee on feeding; published in the supplement to their transactions of 1852, page 29.

In the trials there detailed, I make five pounds of flat turnips equal to one pound of hay, three pounds of carrots equal to one pound of hay, and one pound of Indian meal equal to four pounds of hay; the trials were made with good English hay, and were for milk. In these trials you will perceive that three tons of carrots are equal to one ton of English hay; therefore hay at ten dollars a ton, would leave carrots worth three dollars and thirty-three cents the ton. You will find in the same supplement, page 32d, a letter from the late J. W. LINCOLN, in which he says he gained one quart of milk, daily, by feeding one peck of carrots; allowing carrots to weigh 50 pounds the bushel, or 12½ pounds the peck, and milk to be worth on the farm 2½ cents the quart, and hay ten dollars the ton, the amount would stand thus: Four pecks or one bushel of carrots equal four quarts of milk at 2½ cents, would be ten cents the bushel for carrots; 40 bushels of carrots to the ton would be ten times forty-four dollars the ton for carrots, and to this the daily saving of four pounds of hay, the hay value of 12½ pounds of carrots hay at one-half a cent the pound, and you have \$4.02 as the value of one ton of carrots, or 69 cents the ton more than I made them worth in my trial.

I have but little experience as to the value of the beet family, having made but one trial, and that with the mangel wurtzel. On the 15th of November, 1833, I commenced feeding a steer 43 months old, and weighing 1205 pounds live weight. I fed him on 36 pounds of good English hay daily for 30 days; he gained in weight in the 30 days, 60½ pounds. I then fed him 30 days on 24 pounds of hay, and 36 pounds of mangel wurtzel daily, and he gained in 30 days 62½ pounds, showing 36 pounds of mangel wurtzel to be equal to 12 pounds of hay. I then fed 30 days on 36 pounds of hay, and 108 pounds of mangel wurtzel daily, and the steer gained in the 30 days 125 pounds, or about 4 pounds daily, or twice as much as when fed on 36 pounds of hay alone, which goes to show that 108 pounds of mangel wurtzel are equal to 36 pounds of hay, or that 3 pounds of this root is worth one pound of good English hay, which I believe to be about the truth.

Your query as to whether drains cut so deep

and near together as recommended by the Worcester committee, is a just one, and worthy of consideration. In some favorable situations, it may no doubt prove a good investment, but generally in this State, land suitable for cultivation is too cheap to pay for thorough draining. If land be drained at all, thorough draining is in the end cheapest, and you cannot drain thoroughly without cutting drains deep, and frequent, for the reasons stated in the Worcester county committee's report. There is a query, however, before yours to be settled, which is, whether in our dry climate, draining (except it be our peaty swamp meadows) be recommended at all, whether the advantage gained by draining our retentive uplands, wet in a season, will not be lost in a dry season, is a question not yet decided in this country. I have doubts upon this question, and we need practice and experience to determine the facts. There are good reasons for draining in England under their drizzly, rainy sky, that do not exist in our country. Ten years ago, I cut a drain 3½ feet deep, and six feet wide, through a piece of retentive clay loam land about twenty rods long; last summer the grass 20 feet each side of the drain evidently suffered more from the drought than in other parts of the field. This leads me to doubt the utility of indiscriminate draining, as some ardent gentlemen recommend. The profits on Mr. BAILIE's farm was probably \$100 or \$150 more than stated by him, he being an old-fashioned farmer and very conscientious in his statements; he would, no doubt, make the income from the farm quite as small as it really was. The farm, though large in acres, is small in value, a considerable portion of it being poor, sandy land, producing but little.

Very respectfully yours,
JOHN BROOKS.
Princeton, Feb. 10, 1853.

GLEANINGS.

WARM STABLES.—The *Valley Farmer* says the owner of seven horses, who kept them in a warm stable, ventilated near the eves, stated to him that they ate only two-thirds the quantity of food in a given time that they required in the same time in common, open stables, and the horses were in better condition than they had ever been before.

THE OATS CROP.—The *Germantown Telegraph* thinks the proper time for sowing oats, is as soon as by the absence of frost the earth can be plowed and put in good order; that the early sown, makes the most grain and best quality. Right, undoubtedly. He says, too, that agricultural associations are multiplying rapidly in Pennsylvania. Prof. WILKINSON, in the same paper, announces his intention of discontinuing his Institute at Mount Airy, on the first of March. It has existed eight years—had 217 pupils, among whom were but four sons of farmers—"the latter thinking that they are competent to educate their own sons." A large majority of these pupils have embarked in, or design to make, agriculture their profession.

SKINNING A PEAR TREE.—W. S. LYLES, in the *Soil of the South*, Columbus, Ga., says he stript a

favorite pear tree entirely of its bark, from the limb to the root, on the 21st day of June, and "it neither wilted a leaf nor dropt a pear; but ripened the latter, with which it was loaded, to perfection. It has now [no date] a fine coat of smooth, young, glossy bark, except on a few spots, where the knife happened to strike the wood." Mr. L. thinks this operation will rejuvenate old trees.

NATIVE GRASSES.—The *Farmer and Planter*, Pendleton, S. C., thinks the native grasses, which grow on their branch and creek bottoms, much better than any that grow naturally or can be cultivated successfully on up-land, in that part of the country. Will the *Planter* inform us how much its crop of corn was, per acre, in his experiment with guano and plaster? Both parcels of land—where the gain by manuring was 33 percent., and on the unmanured.

THE AMERICAN FARMER, Baltimore, advises to sow 12 pounds of clover seeds over every acre in wheat. Is that intended for pasture or a grass crop? For a wash for trees he recommends 1 gallon of soft soap, 1 quart of salt, and 1 pound of flour of sulphur. He says, "a peck of crushed cobs and a peck of cut fodder, hay or straw, thrice a day, will keep your cows well up to their milk." If that quantity of feed would keep our cows "well up to their milk," we could make a profit at present prices. But we fear that not only the milk would disappear but the flesh also.

HIGH PRICE FOR LAND.—140 acres of land have recently been sold, eight or ten miles from N. Y. city, at a price of \$500 to \$870 an acre!

INFLUENCES OF FORESTS.—M. Becquerel, a French *savant*, has just published an elaborate work on forests and their influence on nature, in which he treats the subject at once scientifically and historically. He has lately presented to the Academy of Sciences an analysis of that work, containing a notice of the principal conclusions at which he has arrived. They are in brief these, as we learn from the Paris correspondence of the *Boston Journal*: "That forests act upon the climate of a country as frigorific causes; that they also act as protection against winds and as a means of preserving living springs; and that they prevent the degradation or wearing away of mountains. As to the influence of forests upon the climate, there is much difference of opinion, but the above is the opinion of the author, stated with due deference to the distinguished persons who hold different views. M. Becquerel also considers that forests act as protection against the communication from place to place of contagious diseases."

WASH FOR TREES.—"A Practical Farmer," in the *Germantown Telegraph*, says, "for young trees he prefers a ley made of house ashes, to potash; and that when he tries the latter it is only one pound to two gallons of water."

STONE BUILDINGS.—Lumber is every day becoming scarce and higher. Buildings constructed of wood are quickly perishable, unless constantly covered with a coat of paint, and if kept so covered, they are too expensive. We have millions of perches of good stone scattered through New England, large portions of which now cumber the ground by preventing the growth of crops and breaking farm implements. Houses constructed of stone, are more durable, much less expensive to be kept in repair, warm in winter, and cool in summer. Will some one who understands the matter give us the difference of cost of construction between stone, brick and wood, with such other facts as shall turn attention to this important matter!

For the New England Farmer.

ORNAMENTAL TREES.

BY J. REYNOLDS, M. D.

In arranging our estates, it is always well to have some regard to their market value. This is a duty we owe to our families; life is uncertain, and we know not how soon our property may be thrown into the market. A man is under the same kind of obligation to regard the market value of his property, that he is to seek safe and profitable stocks, when he would invest his money in stocks.

A few dollars in money or labor, expended in no other way, will add so much to the value of an estate, as when expended in setting out ornamental trees. Nothing adds so much as trees, to the pleasant and cheerful aspect of a house and the grounds about it. The magnificent elm, with its long arms stretching towards the sky, the lighter ash, the cheerful maple, and the thick heavy foliage of the horse chestnut, interspersed with the fir, the pine and the arbor vitae, whose deep green gives cheerfulness even to the dreariness of winter, when tastefully arranged, and placed in judicious contrast with each other, give a pleasant aspect and an inviting appearance to a house and home, that exposed unprotected to the scorching rays of the summer sun, and to the pitiless blasts of winter, would be unpleasant and uninviting.

A hundred dollars laid out in almost any other way upon one's premises, will scarcely be noticed. If expended in building a porch, an arbor or a trellis, they will soon decay and require a new outlay to keep them in repair. But money expended in trees increases in value annually, faster than money at compound interest. A beautiful tree that costs perhaps, set out, one dollar, will add to the value of an estate in ten years, fifty or a hundred dollars. The growth of trees, which costs only a little care, increases their value rapidly. And a circumstance of much importance is, that such trees may be usually placed in situations where fruit trees would yield but little profit. Forest trees are generally longer lived than fruit trees, and do not require to be so often replaced.

Oaks and elms when once rooted in the soil, become incorporated with the earth, an integral part of the estate; we look upon them as we do upon the rocks and hills, as permanent fixtures, and when we recall the places and scenes with which we were familiar in early life, we find that our memories have retained the forms and

appearances of these old trees, among their most cherished treasures.

One of the attributes with which nature has endowed us, and one which contributes much to our happiness, is a love of beauty. A tree, or a group of trees, is in itself a beautiful object. By selecting and setting out beautiful and symmetrical trees, we have them always before us, and thus gratify and cultivate one of the most pleasing instincts of our nature. And then, in surrounding our dwellings with shade trees, there is a peculiar fitness. They are associated in our minds, with shelter, protection, comfort, and are most appropriate to each other.

The moral effect of surrounding ourselves with these beautiful objects, is by no means to be overlooked, especially when interspersed with trees are flowers, and flowering shrubs. These last are peculiarly beautiful in their season. The fragrant lilac with its modest blush, the creamy white seringa peeping from the deep green of its foliage, the hawthorn, the sweet briar and the wild rose, filling the air with sweetness, the snow-ball, with its clustering petals, the delicate hues of the althea and the pearls of the snow-drop mingle their beauties and their fragrance with the scene. And while our sight and our smell, our love of beautiful forms and sense of fitness are gratified, and a spirit of cheerfulness and contentment steals over us, we can rejoice that this is our home, and our hearts swell with gratitude for so many pleasant gifts. Contrast the possessor of such a group of flowering shrubs and beautiful trees, with the man whose home knows no cooling shade, no sweet scented flower, no graceful forms waving in the wind or murmuring in the breeze, and say if the latter would not make a cheap purchase could he secure the pleasure which the former is enjoying, at many times its actual cost.

Our fathers set out many elms and sycamores and maples, and there are in many of our villages, fine trees of these kinds, the monuments of their taste and forethought. We can only regret that they did not plant a greater variety, and plant them in greater numbers. Were all the villages of New England ornamented with avenues of elms, oaks, maples, ash, horse chestnuts and English elms, interspersed with firs, pines and arbor vitae trees, and the immediate vicinity of our dwellings adorned with flowering shrubs, as is the case with some villages in the near vicinity of the metropolis, and beauty and taste thus combined with Yankee thrift and enterprise, New England would be unsurpassed for attractiveness, by any part of our country. A judicious mingling of trees adds much to the beauty of a rural scene. Evergreens growing under the shelter of more lofty deciduous trees, add to the cheerfulness of the picture, and afford a useful screen from the wintry blasts, when they can be planted upon the north side of avenues, yards and gardens. Trees planted in groups as they grow in the forest prevent in some degree the evaporation of moisture from the soils, and are more likely to thrive than when standing alone. In their native forests, nature provides for the nutriment of the trees, by the annual decay of their leaves. But when trees are set singly, or in small groups, their falling leaves are mostly dispersed by the winds, and the ground must be made rich by other means, if we expect them to thrive rapidly. Probably the best manure for forest trees is a col-

lection of their own leaves, covered with sufficient soil to prevent them from blowing away. The cultivation of forest trees has been but little attended to; it has been thought quite enough to set them out. But there is no doubt that forest trees, as well as fruit trees, will thrive better under suitable culture, and will amply repay judicious care. I intended to speak of the proper methods of removing and setting trees, but must defer it to another time.

Concord, Feb. 17, 1853.

A SONG FOR THE MILLION.

The following beautiful song was written by request of the Hon. ZADOCK PRATT, of Prattville, N. Y. It is one of those productions which never grow old,—for as long as there is occupation for men, and their hearts beat, there will be found a sentiment in it to touch the heart and encourage it.

BY HON. B. B. FRENCH.

AIR—*The Hunters of Kentucky.*

The noblemen of Nature are
The hardy working classes,
The tillers of the yielding soil,
The blouses and the masses.
The stalwart farmer drives his team,
And while he turns the sod, sir,
He sings his song of happiness,
And puts his trust in God, sir!
O, the Farmer, the independent Farmer—
O, the Farmer, the independent Farmer!

He to the soil commits the seed,
The fruits spring forth and thrive, sir;
He gathers in the harvest, and
He keeps the world alive, sir.
Then bless the Farmer in your prayers,
And neither thwart nor flout him;
Be grateful to him always, for
You cannot live without him!
O, the Farmer, &c.

The Blacksmith—how beneath his sledge
The sounding anvil ring, sir;
Amid the flying sparks he stands
More sovereign than a king, sir:
The heated mass assumes a shape
Beneath his swinging blow, sir—
The coultter, and the scythe, and spade,
Within his furnace glow, sir.
O, the hammer, the anvil and the hammer—
O, the hammer, the anvil and the hammer!

Blacksmiths are men—"aye, every inch"—
Their sinewy arms behold, sir;
They, solid as their anvils, are
Of Nature's purest mould, sir.
The Blacksmith takes the precedence—
Of trades it is the trade, sir—
The haft is worthless till it holds
The keen and glittering blade, sir!
O, the hammer, &c.

Next in the scale of workmen
The hardy Tanner see, sir,
Delving amid his hides and bark,
As busy as a bee, sir:
His art converts the unseemly hide
Into the polished leather,
Which sparkles in the mazy dance
Or brushes through the heather.
O, the Tanner, the busy bustling Tanner—
O, the Tanner, the busy bustling Tanner!

Should enemies invade our soil,
Their force we would repel, sir,
By calling all the Tanners out,
To tan the rascals well, sir;

They'd stripe them off, and star them o'er,
And curvy them, no doubt, sir;
So that "their anxious mams would guess
Their children had been out," sir!
O, the Tanner, &c.

A niche for good Saint Crispin's sons,
Of quiet life and manner;
The world were *bootless* but for them—
They exceed well the Tanner;
Well are they styled "the gentle craft,"
O'er Beauty's foot they bow, sir;
And oft, I ween, they steal a kiss
From Beauty's placid brow, sir!
O, Saint Crispin—the gentle sons of Crispin—
O, Saint Crispin—the gentle sons of Crispin!

But, should we name each working class
In this our working song, sir,
Perchance it never would be sung,
For it would be too long, sir;
Then here's to all who use the plane—
The axe, the saw, the crow, sir—
The soldering iron, the turning lathe,
The shovel, spade, or hoe, sir.
O, the masses—the independent masses—
O, the masses—the independent masses!

The days of monarchy are o'er—
All men are monarchs now, sir;
The people rule, and monarchs may
Before their sovereigns bow, sir!
The jewelled crown, the purple robe,
Man far away shall fling, sir;
And sceptres shall be working-tools—
The printing press the King, sir!
O, the people—the independent people—
O, the people—the independent people!

For the New England Farmer.

THE FARMER WITH TWO IDEAS.

BY A. G. COMINGS.

There was a farmer I knew, and a merry man was he, who had one idea at rising up, which went with him all the day, and another at going to-bed, which last was as old as its brother idea, and these made the merry mood of the merry farmer I knew.

The morning idea danced out with a jovial song for *A Present Profit* to the worker who breaks the turf and mellow the yielding soil; and the evening idea was as merry as merry could be, among the growing trees, the stretching vines, the children at school or play, and all the growing tribes in house or barn, as the song of *A Profit for years-to-come* was heard with inspiring glee.

Year after year the merry man kept up his two ideas, and they filled his barns, they filled his cellar, they filled both garret and stall, and they filled his purse so the strings would often break and the bank would only take the burden of his toils. And the merry farmer became a walking wonder, and a thousand wondering people said, "Why is it?"

Then they all began to talk about the farmer's two ideas, and how they kept him in such a merry mood. And they found that the morning idea was not forgotten, nor allowed to trespass on the evening idea. So the farmer never worked his farm without feeding it, and he was careful to give it food which would cause it to produce very plentifully in immediate action, and yet remain healthy for time to come. It was established also that the evening idea should not be left alone at any time; but, where much was hoped for in

time to come, much must also be exacted in the passing day.

His fields produced plentifully, but every year gave an increase of plentifulness, compared with the year before. He procured the most active manures, and by these secured large and immediate crops. Upon the same ground he put large supplies of less active manure at the same time, and this gave promise for the future. One gave him "joy in harvest," while the other gave him hope of "a good time coming."

His gardens flourished, his trees grew, the birds sang by his door, his daughters were virtuous and happy, his sons loved the open world for a workshop, and his wife sat a queen in their own quiet court; and all this joy and gladness came along in the very same path where the farmer's two ideas led the way.

Thus lived the merry man to a good old age, and prospered in all his many years, singing along the way of life about "A present profit," and "A profit for years to come."

A REASON FOR THIS AND THAT.

To manage a farm for mere present profit, at a sacrifice of its ability to produce in future, is like a man's tearing down one side of his house for fire-wood, in a winter day. He makes a gain by a greater loss. Yet the practice of skinning and robbing farms by reducing their ability to produce, for a present scanty profit, is a way that too many follow. It is very seldom the case that a man makes a profit by the cultivation of any piece of ground which is not really made better for future use at the same time. But it can be made poorer either by cropping without manuring, or by cropping while a scanty amount only of very active manure is applied.

To manage a farm only for future profit, while the owner has no wealth beside, upon which to rest, is like going to sea in a bark canoe with the expectation of finding a good and richly laden ship in some quarter of the ocean; or like a penniless man starting for California without provisions. Every man who needs to increase his wealth, by farming, must give attention to present profit.

Every farmer should study to know the way of securing a present and also a continued profit, with an increase.

The idea of a present and a continued or future profit in farming, is like the boatman's illustration of faith and works by the two oars of his boat. If he pulled upon the one which he called faith, he made no headway, but only whirled round and round. If he pulled upon the other, which he called works, he was whirled about in the opposite direction. If he drew both at the same time, his boat was hurried over the waters.

Upon most farms there is necessity of cultivating a variety of grains and grasses, some of which must be cultivated with care, attention and manuring every year, to secure a profit. It should be equally the object of the common farmer to manage his grain and grass fields, his orchards and his garden grounds, so as to secure present profit while he is preparing every department to give a better profit in years to come.

In the management of some farmers a habit of doing things "for the present" prevails over every idea of doing substantially what is done. In this way everything is daily found out of place or out

of order. Continual loss is consequent upon it. This is justly called the "short-sighted" policy. It is so much the way of some, in the farm house as well as outside of it, that the short-sighted economy which they pursue is a source of constant loss and misfortune. They may be industrious, apparently economical, and seek prosperity with untiring diligence, but poverty comes in their train. With such a family, either the man or the woman is shortsighted in management, and the order that is necessary to prosperity is not with them.

TWO PERSONS FOR TWO IDEAS.

The prosperous farmer has the two ideas which lead to prosperity; and he has a wife—yes certainly, a wife he has, who has also the same two ideas with himself. She can see beyond the end of her nose as well as he, and she can see what is within her reach also, as well as he. She secures the present profit and the profit for years to come, and puts to use the proper things in the proper time, and when she has used them she always puts them in proper order and in a proper place. And all I have to say more is only this: the merry farmer I knew had two good eyes, and he had "a little wife well willed," who had also two good eyes, and they both together had two good ideas, and they walked the path of life together, seeing to learn, and learning to a profit; and nobody can wonder any longer that he was a merry farmer all his days.

Mason, N. H.

LEGISLATIVE AGRICULTURAL MEETINGS.

EIGHTH MEETING—TUESDAY EVENING, MARCH 15, 1853.

The eighth meeting of the season was held at the State House on Tuesday evening. The subject for discussion was "*The Preparation and Application of Manures.*"

SIMON BROWN editor of the *New England Farmer*, presided, and on taking the chair, expressed the opinion that by an intelligent investigation of the subject of manuring, our neglected lands might be increased in fertility to the amount of millions of money annually. He then offered some practical remarks in relation to the subject. All matter stimulative of vegetation is manure, and the constituent elements of vegetables tell us what ingredients manure should contain in order to produce vegetation. Vegetables are composed of oxygen, hydrogen, carbon and nitrogen, and of course the manure applied to them should contain these elements; in preparing manures, we should collect all such vegetable substances as contain these requisites—those which may be fed to stock and that which can be used to absorb the liquid manure which falls from them. Vegetable matters decomposed by placing in the barn-yard or under cattle, are nearly worthless compared with an equal amount converted by stock. One hundred lbs. of fresh cow offal will furnish 2 lbs. 2 ounces of carbonate ammonia, while Johnson says 100 lbs. of hay would scarcely afford as many ounces as the former does pounds. It is the nitro-

gen, which evolves the ammonia, and gives manure its chief value; but this is not contained in the hay. Hence the kind of food fed to cattle is important. A cow, fed liberally, according to Dana, will prepare daily, about one bushel, or 85½ lbs. of manure, or in a year

4,800 lbs. of humus, or geine.
677 lbs. of carbonate of ammonia.
71 lbs. of bone dust.
37 lbs. of plaster.
37 lbs. of limestone, marble or chalk.
25 lbs. of common salt.
13 lbs. of sulphate of potash.

A cow will produce about 3½ cords of pure manure in a year, weighing 9,289 lbs. By taking the number of cattle in the State, and making an estimate as accurate as possible of the amount of manure they furnish, and affixing its cash value, we can ascertain what it ought to produce in crops.

Basing his calculation on the census of 1850, Mr. BROWN estimated that there were in this State, 150,000 milch cows, 47,000 working oxen, and 83,000 other cattle, each yielding 3½ cords of manure annually, making an aggregate of 980,000 cords. Besides these, 42,000 horses, at 2 cords each, 84,000 cords; 81,000 swine, at 3 cords each, 243,000 cords; 188,000 sheep, which with the poultry, will equal the swine, giving 243,000 cords more. This gives a total of 1,550,000 cords, which at 7¢ per cord, a price which has ruled in Concord [Mr. Brown's residence] for many years, constitutes a value of \$10,850,000 per year! Besides this, the speaker estimated that a fair valuation of night soil, street sweepings, refuse matter of sugar refineries, &c., would swell the amount to \$20,000,000 annually.

In order to ascertain what this amount of manure should produce in the way of crops, the speaker selected the article of corn. If this grain is planted at the usual distance of 3½ by 3 feet, it gives 4,148 hills per acre. One peck of manure to each hill, which is a large allowance, would in 149,796 acres absorb the estimated amount of barn manures. At 40 bushels to the acre, this would yield 5,991,840 bushels of corn annually,—more than double the quantity ever yet produced in the State.

After manure has been saved, it should be kept from exposure to rain and the sun, else its salts will be washed out and its gases evaporated.—Great care should be observed not to let it ferment too much, because such an excess destroys its most useful qualities. Mr. COKE, a distinguished English agriculturist, has discontinued fermenting his manures, and he states that his crops are as good as ever, while the manure goes nearly twice as far. When placed under the soil, and contiguous to the seed, unfermented, the plant secures the benefit of the fertilizing fluids which exude from it in the course of fermentation, while the heat evolved renders the soil about the

plant a sort of hot-bed. A slight fermentation previous to use is undoubtedly useful, as that commences the process necessary to make the manure impart its fertilizing properties.

As to the application of manures, the speaker said that green, coarse manures, might be plowed under late in autumn, and the ground plowed again in the spring, before planting. He had pursued this course with satisfactory results. On corn land he would spread broad-cast, plow under three or four inches, on a light soil, and one or two inches on a compact soil, and apply ashes, guano, or some other special manure in the hill.

In regard to guano as a manure, Mr. BROWN believed it to be a most powerful fertilizer, notwithstanding many who have used it have been disappointed, and call it a "humbug." But it must be used with extreme care—the proper time being when the atmosphere is damp. It should be covered up immediately on being applied, and not suffered to remain on the surface of the ground. It should be used with peat mud that has been thrown out a year, pulverizing both well, and mixing five or six parts of muck to one of guano, which should be done on the morning of the day on which it is to be used. Mr. BROWN thought the difficulty which farmers had experienced in using it arose from applying it when dry. The best method is to apply it in a liquid state, but this cannot be conveniently done except in gardens.

Mr. WILDER, of Dorchester, was called upon by the chairman, and offered some remarks in regard to guano. He believed that at the present high price of labor, the cost of barn-yard manure on a piece of land would exceed that of an amount of guano sufficient to produce an equal crop. He considered it the very best kind of manure. It always succeeds best in a moist climate, and hence the immense quantity introduced into England, where \$8,000,000 per annum is expended for it. Mr. WILDER related some instances of its great fertilizing effects. Mr. VENABLE, M. C. from North Carolina, had communicated to him the results of its use upon his farm. He had several thousand acres which he regarded as hardly worth cultivation. He applied guano to it, plowing it in deep, at the rate of only 150 pounds to the acre; and from the whole of this land he obtained an average of 23 bushels of wheat per acre; whereas before applying the guano he got only 5 bushels. Another instance was that of Mr. HOLCOMB, of Delaware, who purchased a farm of 2300 acres, with a brick house thereon, for \$2500, owing to the miserable condition of the land. He sowed 75 acres of it with wheat, plowing in about 10 tons of guano; and the first crop paid for the farm and all its expenses, and left a small surplus besides.

Mr. WILDER's plan was to compound one part of guano with six parts of meadow mud, pulverizing it, and adding another part of charcoal; plac-

ing it in a heap (which must be kept covered,) three weeks before using it. He had found by experiment that half a handful of this compost was as good as a whole handful put in dry. In sandy soils it should be placed pretty deep, but in clayey lands, shallow. It should be applied early in the spring. Seven years ago he reclaimed a piece of meadow, and dressed it with 300 lbs. guano to the acre. The first year the crop was so heavy that it mildewed, and he had not been obliged to renew it.

Mr. SHATTUCK of New Hampshire, said he had tried guano considerably the past year, using it on most every crop on his farm, and generally with good results. He had a peice of land of about two acres which he had always considered worthless. He plowed it up and manured it with guano, quicklime and plaster, and planted with early potatoes, which yielded the best crop he ever had. His manure, which cost \$6 per acre, was composed of 130 lbs. guano, 300 of plaster, and 100 of quicklime. The plaster and quicklime were first sown broadcast, and thoroughly incorporated in the land, and then the guano, mixed with meadow mud, was plowed in, and the ground harrowed thoroughly. The seed was dropped immediately upon the compost. The soil was very dry. He used the lime to disengage the ammonia of the guano. Mr. SHATTUCK plants his potatoes in a furrow, without hills, on loamy land, and thinks them less liable to suffer by drought, because hills shed the water. The New Hampshire farmer who took the premium at the State Fair for his potatoes, planted them on a flat surface having a mellow soil beneath for the plant to strike its roots into.

The speaker regarded guano as most excellent manure to force crops; and stated that he had a plot of cucumbers which the bugs destroyed two or three times, and it being late in the season he concluded to plant again and force with guano. He mixed guano with lime and put it into the hills covering it and placing the seed upon it. In three days after dropping the seed, with no rain in the meantime, the cucumbers were up an inch, and he had an abundant crop.

Prof. NASH, of Amherst College, said he had applied guano the past year to about a third of an acre of land, at the rate of 200 lbs to the acre, and gathered therefrom a splendid crop of Indian corn, remarkably well filled out, and surpassing that raised on contiguous land manured with bone-dust. He was of opinion that our farmers should avail themselves of all the resources of their farms for manures before purchasing guano. The farm, as a general rule, should be made to fertilize itself. Prof. NASH coincided with the chairman in regard to using green manure; if put immediately into the soil, its operation is very advantageous, because the plant gets the benefit of a large propor-

tion of ammonia, nitrogen and carbonic acid, which would be lost if the manure were suffered to lay over. Plow it in shallow, if the soil is clayey, a little deeper if loamy, and still deeper if sandy.

On motion of Mr. CLARK, of Waltham, the subject of manures was continued to the next meeting, when a part of the evening will be devoted to it, and the remainder to "The subdivision and fencing of the lands of a farm."

For the New England Farmer.

THE PEWEE—SOOT FOR PLANTS.

MR. EDITOR:—Having seen in your valuable paper an inquiry made touching the birds of New England, I send you the following facts concerning the well known little bird, Pewee, or fly-catcher. About five years ago, I had a pair of these birds. (You will pardon me for calling them mine, for they were my songsters and companions, for fourteen years, and left me only when repairs of buildings drove them from their old home.) In the last of March, or first of April, perched on the buildings or fences, will be seen the Pewee, filling the air with his joyful notes. But his stay at this time is only about a fortnight, for he soon gets weary calling "Phebee," for she answers not. If it is fine weather, a journey of twelve or fourteen days will find them at their old home, busy repairing or building their nest.

For eight successive years they built their nest on a sleeper of my barn, within a few feet of each other, and in this time they built four nests, constructing a new one every other year. They repair the inside of the nest after the first brood have flown. The next spring, if the upper edge of the nest gets loose, they repair it, and replenish the inside with a new coating, and do the same after the first brood has flown the second year, so that in eight years they had four new nests, and repaired them twelve times, each nest having been used for four broods.

It takes them seven or eight days to repair a nest. Afterwards they placed their nest in a building over my tanner's beam, and several times changed it to different buildings as I changed my place of work. They would alight on the beam and watch their prey whilst I was near them.

In fourteen years, they reared about one hundred and twenty young, for none were destroyed by idle boys, and even old puss seemed to have learned to respect them, as she was never known to catch any. They are very industrious in catching flies, taking from two to four a minute, when they make a business of feeding their young.

SOOT TO DESTROY VERMIN.

I have been informed by a gentleman from England that they pay \$45 per load for chimney soot, to spread on their land for the purpose of killing vermin. I wish to know if it is used for such a purpose in this country? Would it not be good to roll corn in before planting?

Respectfully yours, JOHN M. MERRILL.
Bristol, N. H., March 4, 1853.

REMARKS.—Soot is a capital fertilizer, and is frequently used to kill insects. It is certainly advisable to save it all and apply it in some way to the crops.

For the New England Farmer.

AUTUMNAL MARROW SQUASH.

MR. BROWN,—DEAR SIR:—Much discussion has lately arisen, about who first introduced among us this fine variety of squash, which has been received with so much favor, as to nearly shove aside all others. In a letter that I received from Dr. Harris, of Cambridge, dated Nov. 6, 1851, he speaks of this variety, as having been "first described by Mr. Ives, of Salem," who "procured the seeds of it from North Hampton." I think I have heard the same statement from Mr. Ives, himself, whom I know to be a discriminating cultivator of garden vegetables. I have lately been informed by Mr. A. Lord, of Salem, that he grew the first specimens of this squash that were ever raised in Mass. That he received the seeds from Mr. George C. Buxton, of Danvers, to whom six seeds came in a letter from South America, two only of which produced fruit—these under the care of Mr. Lord. Without presuming to say who is right and who is not, I present such facts as have come to my knowledge; leaving it to those who know more to correct my statements, if erroneous. Your obedient servant,

Danvers, Feb. 12, 1853. J. W. PROCTOR.

STOCKHARDT'S FIELD LECTURES.

A capital book, which we commend cordially to every farmer. We like it for several reasons: 1st, Because the doctrines it teaches are true; 2d, Because it is written in a clear, simple style, and can be readily comprehended by those who are not adepts in chemistry; and 3d, Because it places science in its true position. While it claims for it the importance that justly belongs to it, it recognizes the value and the authority of experience. It admits that "the chemist cannot here exert a sovereign sway over fixed invariable quantities, and uniformly continuous conditions," but is as dependent upon soil, climate, wind and weather, as the husbandman himself."

His chapters upon artificial manures, guano and bones, are of great value, and cannot be too highly commended to the attention of all cultivators. Had he been acquainted with the value of barn cellars in the manufacture and preservation of compost manures, we should have learned the fact in his chapter on stall manures and straw. In this respect we think New England farmers have made a step in advance of their Teutonic cousins. We are sorry to observe so great carelessness in the use of numbers, as we have noticed in perusing the book. For instance, on the 154th page, we are told that Saxony contains 7000 inhabitants to a square mile. Being somewhat startled at this, we looked into the matter and find that according to the Saxe Weimar Almanac, Saxony, in 1840, contained 270 to the square mile. Belgium, the most populous country in Europe, contained 365. On the 194th page we are told that one-half an ounce of the best Peruvian Guano, on being burned, leaves only one drachm (30 to 33 per cent.) of

ashes. On the 196th page, we find 2 drachms (from 50 to 55 per cent.) If one drachm is 30 to 33 per cent., 2 drachms must be more than 50 to 55. But every school-boy knows that 8 drachms make one ounce, and that 1 drachm is 25 per cent. of half an ounce. Why then use numbers so carelessly? In the tables, too, in which peculiar care should be used, we notice several great incongruities. We trust these errors will be corrected in future editions, and we are the more desirous they should be, because the book is one of the best that can be put into the hands of the practical farmer.

For the New England Farmer.

OLD PASTURES AND CRANBERRIES.

MR. EDITOR:—Having a pasture of several acres situated a mile and a half or two miles from home, that needs plowing very badly, I have thought proper to inquire through your paper, from you or some of your correspondents, the most profitable way to manage it. The land is suitable for rye or corn, and capable of producing large crops of either; containing as it does a sufficient quantity of rich loam interspersed with gravel.

Would it be best to plow it in the spring, purchase some guano, lime or such like manure, (as it is too far to cart barn-yard manure) and plant it to corn; or would a wiser course be, to plow it in August or September, and sow it down to rye or grass. (a.)

If the former, what would be the cheapest manure to purchase, and the probable cost and quantity per acre. If it was not thought advisable to plant corn at so great a distance from home, should rye or grass seed be sown without any manure being applied to the land. (b.)

CRANBERRIES.—Will some of your correspondents give their experience in, and methods of cultivating the cranberry. Can the cultivation of this plant be made profitable to the farmer? Having several acres of swale land near by, producing but little hay, as the soil is of a mucky nature to the depth of three or four inches, and underneath is a hard pan of clay, I have serious thoughts of plowing up a portion of it and setting out the plants of the upland cranberry; but before doing so, I wish to ascertain whether the soil is adapted to the growth of that plant, and whether I could use the land to a better purpose.

Any information in relation to the above subjects, will be thankfully received by a

YOUNG FARMER.

REMARKS.—(a.) We have a pasture of eight acres which has been regularly fed for 25 years, until the whole product is not more than what one acre ought to be. The conclusion arrived at after reflecting upon the whole matter, is, that we shall plow it in August, manure a portion with plaster and guano, and sow with rye and grass seed, and let the cows run upon it about the first of June. Another portion with plaster and phosphate of lime, and another with plaster and ashes. Will you do so and let us know the result?

(b.) No, you would lose a large portion of your

labor of plowing, by pursuing such a course. Better plow less and take good care of it.

You will find scattered through the volumes of the monthly *Farmer*, accounts of cranberry culture. Where you can turn up a white sand by plowing, cranberries usually succeed well. We doubt whether they would in a clay subsoil.

For the New England Farmer.

CORN CULTURE.

MR. EDITOR:—In the last volume of the *Farmer* may be found some remarks by me, on the cultivation of corn, at pages 73 and 324. Since that time I have had occasion to change my views, as expressed on this subject, on page 73, Vol. IV., as it regarded planting corn on land that had been planted to potatoes the year previous.

Last spring I planted five-eighths of an acre to corn, using eight cords of unfermented manure, composted with muck, according to Mr. HORSBROOK'S directions, page 381, Vol. III., of the monthly *Farmer*, plowing it in to the depth of eight inches, and then cross plowing to the same depth, and then harrowed down smooth, and furrowed out and applied three cords in the hill, making in all eleven cords used. About 150 lbs. of gypsum was put on after the corn was up. The yield was forty bushels. Potatoes were grown on this the year previous. Four cords less of manure were on the five-eighths of an acre, than were used on the acre and a half the year previous, yet the yield was 15 bushels the most on the five-eighths.

Now I attribute this to two causes. First, the manure was put on in a sufficient quantity to be felt by the corn the whole season. The decomposed manure gave it a start the first of the season, and the last part the green manure did its work in producing a crop. The second I attribute to the deeper plowing, one being six and the other eight inches. Of the benefits of deep plowing I need not speak, for they have been so clearly pointed out in the *Farmer* for the last two years, that all who have read it need nothing but facts to be able to see the good effect at a single glance.

Yours for the cause of agriculture,

S. TENNEY.

Lewiston Falls, March 7, 1853.

MASS. HORTICULTURAL SOCIETY.—Through the attention of E. WIGHT, Esq., Corresponding Secretary of the Society, we have before us the schedule of prizes offered for 1853, as follows:

Prospective prizes.....	\$750
Gardens, Greenhouses, &c.....	200
For Fruits.....	620
Plants, Flowers and Designs.....	750
For Vegetables.....	250

Making in all the handsome sum of \$2,520,00.

The prospective prizes are for objects to be originated subsequent to the year 1846, and which, after a trial of five years, shall be deemed equal, or superior, in quality and other characteristics, to any now extant. Many of our citizens are scarcely yet aware of the high degree of pleasure and profit they may derive from a connection and more intimate acquaintance with this excellent association.

CLARK'S EXCELSIOR CHURN.

We know nothing of this churn from personal experience, but as it is spoken highly of, and has the appearance, in itself, of being a useful article, we give the inventor an opportunity to explain the machine himself.

A is the rotating or revolving body, worked by crank and gearing, as shown, or it may be attached to any motive power by passing a band directly on to its raised hoops G G. Two or more large churns can thus be driven in one frame, by passing a short band from the first cylinder to the second, and from that to a third, &c., thus affording facilities for churning any quantity of milk and cream, together or separately, at one operation. By a new and simple device, the body is easily made water tight at its lid and bearings on the fixed or permanent axles. The cross bar or dash is a narrow wooden bar, placed longitudinally above the centre of the barrel or body, with projections B on its upper edge, extending upward to the periphery, at any desired angle. Pins inserted in two side staves of the cylinder, pass between the projections on the cross bar, which is removably attached, or supported by iron braces, to the axles on which the body rotates or revolves. The axles are hollow, with ventilating funnels C C set in the blocks and extending downward into their cavities. By closing the outward ends of the axles, a perfect ventilation of the cylinder is effected, even when filled above the place of its axis. The cavities of the axles permit the crooked water tubes E E to be passed through them, to be inserted in the corked ends of the small metallic cylinder in

the centre of the churn. Through these tubes, (which close by their flanges, the outward ends of the axles, and being of less diameter than the cavities, so as not to obstruct the ventilation,) a stream of cold water can be kept running; the water passing down the outward injecting funnel through the tube, filling the tempering cylinder, (the small tube on the cylinder should be corked after the air has escaped,) and passing out at the waste pipe. These need only be used when tempering is necessary, and where running water cannot be applied, a few pails from the well will reduce the temperature sufficiently. A thermometer may be used to ASCERTAIN THE TEMPERATURE OF THE WATER at the waste pipe, which will indicate directly milk or cream. The cross bar, tempering cylinder and tubes, can all be removed from the barrel of the churn, thus leaving nothing but the empty cylinder for cleansing.

The EXCELSIOR CHURN is not designed merely as an improvement on any other patent churn. It is in fact different in construction and operation from all that have preceded it, consequently the objections which may be made in reference to other churns, will in no sense apply to this. The proprietor having had many years experience in a large dairy, professes to know what dairymen need, and what they require in a perfect churn. It is necessary that milk and cream should be kept below the temperature of summer air, both before and during the operation of churning, certainly as low as 62°. The Excelsior Churn will do this. The running water will not only reduce the temperature in passing through the metallic cylinder, but it will also take away all of the ANIMAL HEAT from new milk, and also the HUMIDITY from the fluid,

whether it be milk or cream, to be churned. The scientific dairyman will understand this. The result is an increase of the product, while the peculiar action of the churn, in bringing all of the fluid within the resistance of the dash or cross bar, adds at least one pound in twenty to the quantity of good marketable butter.

BENEFITS OF ASSOCIATED EFFORT.

[Remarks of the Hon. J. W. Packer at the Agricultural Mass Meeting at Concord, March 10, 1853.]

The notice of the meeting of farmers of Middlesex to be holden *at this time, at this place*, awakened in my breast the liveliest desire to be present, and to be instructed thereby. Where the ball of freedom received its first impulse, *eighty-seven years* gone by, seemed to me a place peculiarly appropriate to start anew in the march of agricultural improvements. It is fit, that Middlesex, the first born of the Massachusetts family, fourteen in number, should call this family meeting, to greet each other, and consult for the common good. There are no jealousies or bickerings to disturb our harmony. There is no occasion for any one, to crowd upon any other. The field is broad enough for all, and the crop is ready for the harvest. All have the same purpose in view. It is meet therefore, to consult together, how this purpose can best be accomplished.

While we the children are looking about to see what is the duty incumbent upon us, we must not forget the mother of us all—the *Massachusetts Society for promoting Agriculture*—who although stricken in years, still gives evidence that the vigor of youth flows in her veins. In the annals of this society, will be found much wisdom. When perusing the pages put forth by Lowell, Pickering, and their associates, I have often doubted whether we were advancing in improvement so rapidly as we profess to be. Fortunate will be the man who can write better *essays*, or make better *speeches*, than those men made *fifty years ago*. I have had communication with many farmers, and many men, who professed to have knowledge of agricultural science, but I frankly admit, that I never met the man, who so clearly comprehended the reason for what he knew about the cultivation of the earth, as TIMOTHY PICKERING.

Who does not remember the hints that appeared every spring, on the pages of the *Columbian Centinel*, from the pen of the Roxbury farmer. Plain and simple in their character, but still of great value in their consequences. These were among the first lessons in agriculture I ever learned. I remember with what interest I used to look for them, and how my father used to read them, and compare them with his own experience and observations. Instance the time of flowering of fruit trees; the temperature about that time; the prevailing winds; and many other accompanying circumstances; and hence, an inference was drawn, as to the prospects of the coming season. By such habits of observing and recording, the experience of many years is concentrated in one, and useful lessons of instructions are accumulated. In fact, the difference between a wise man, and one not wise, consists in the accumulation and concentration of small facts. "Many a little makes a mickle," as is the proverb;—which expresses more truth than elegance. The laws of the seasons change

not. Who does not remember, when the drift of snow used to form across the way, when he was a boy, on his route to school; let him go there now, after a drifting northeaster, he will find the same position, blocked in the same manner. So in the vegetable economy, the laws of origin and progress are alike unchangeable. A careful observation of these, will guard against many a mistake. The farmer needs "line upon line, and precept upon precept." For this purpose, farmers should come together and compare their notions. The interchange of views, rules asperities, and corrects absurdities. Let a person be once put down, in inculcating false notions, and he will ever afterwards be more careful in his remarks—or if not they will soon cease to command attention. There are many notions abroad in the world, which need only to be *exposed*, to be *scouted* and *despised*.

To illustrate the benefits that may accrue from the meeting of farmers, and familiar interchange of ideas, allow me to refer to a farmer's association formed in my own town, before agricultural societies had much come into being, in 1809 or 10, I think. A series of questions was propounded to them by the State Society, such as were forwarded to many other towns of the commonwealth, and each member was required to bring in his own experience, that correct answers might be returned. At this time, being a boy, and ready in the use of the pen, I remember to have been employed by my father, himself an observing farmer, to arrange and copy these answers, to be returned to Boston. I felt honored by the commission. I cannot doubt that the impressions then taken gave an impulse to my mind in favor of the employment of the farmer. I have only to regret that it had not been *sprung* to such a degree as never to have been diverted. For after more than *forty years* observation of men and things, I am free to say, that the man who starts in life with a determination contentedly to devote his energies to the culture of the soil, free of ambition, of official distinctions of every kind, takes the wisest course. In this free country, where every man can readily acquire a title to the soil he tills, such employment will surely succeed; provided he has the discretion to graduate his expenses according to his income. And no employment will succeed, without this limitation. Thus managing, at the age of *fifty*, he will be found comfortably situated on his own farm, with a lovely family around him; made vigorous and happy by the same labor that has afforded the means of living. What position can be more desirable? Well did the Roman poet exclaim—"O, too happy farmer! did you but know the enjoyments at your command."

A few years since, Simeon L. Wilson, of Methuen, (I believe he is not living now,) sent in his statement to the committee on farms of the Essex Society; which, when the facts came to be known, awakened much interest. It appeared, that this cultivator of the soil had been a cripple from his youth, with no command of his lower extremities whatever, and only able to move from place to place, as moved by others, or in the little go-gig that his ingenuity had constructed. He had come into possession of about an acre, of what was deemed a *worthless bog*, situated by the side of the way—for years claimed by no one,—and had contrived to drain it, and cover it from the adjoining knolls, so that he grew thereon, a nursery of more

than 12,000 fruit trees, and a variety of fruits of fine quality in considerable abundance. In fact, he so managed it, as to be able to sell enough to support himself and his mother, from the products of this reclaimed acre; thereby saving the town more than \$100 a year, to which they would otherwise have been properly subjected. In the close of his statement, he exclaims with devout reverence of that Providence which had so greatly favored him,

"I am monarch of all I survey;
My right there is none to dispute."

Who will say that this humble cripple did not sleep as soundly and enjoy as much as does the monarch of all the Russias?

In my reference to the association of farmers at Danvers, the point I intended chiefly to illustrate, was the benefits that accrued to the farmers themselves. Each thereby became informed of the more successful operations carried on around him, and the means whereby they were brought about; and having learned these, he would no longer be *delving on* in the old way, realizing only half as much as his neighbor. A man will work contentedly when he does not know that others are doing better than himself, but when he does, he soon becomes uneasy. No man will be content to grow but thirty bushels of corn to the acre, when by the same exertion properly applied, he could secure fifty. Does not this illustration explain the condition of the farmer in Massachusetts at the present time? Has it not been again and again demonstrated, that on lands of only moderately good quality, more than fifty bushels of corn to the acre can readily be grown? Why then should the farmer be content with their present crop, of this indispensable grain, averaging at present little more than thirty bushels to the acre? What is true of this crop is applicable to most others.

Let me illustrate the position I have taken, by reference to the farm of Mr. J. D. BROWN, of this town, the interesting account of the cultivation of which has lately appeared in the admirably arranged pamphlet of the Middlesex Society; and which if I mistake not, commanded the first premium of this society. Does not this show his crops to have more than doubled in a very few years—and this under a mode of culture that brings its own reward? I know there may be a hot-bed growth—that costs more than it comes to—but such cultivation cannot be approved. What is wanted, is a mode of culture that yields fair crops, and at the same time, leaves the grounds in improved condition. Another instance is to be found in the same book, on Mr. WHEELER's farm of forty acres, which, if I understand his statement, has been made to yield a nett income of \$20 an acre, for the whole farm—that is, an income of \$800 a year from a farm of forty acres. Now, sir, apply \$300 of this to contingencies, you will have \$500 left, which is double the amount usually realized by cultivators of the soil. I have purposely referred to these home illustrations, in Middlesex, because, if I am wrong, there are those present who will correct my errors. Though I could refer to instances of the culture of vegetables in Essex, that would go far ahead of the samples mentioned.

Whoever reflects upon the *tenure of the soil* in Massachusetts, as well as in most of the N. E. States, cannot but be impressed with the influ-

ence of this *tenure* upon its *culture*. To ensure successful culture, "the tiller of the soil should have an interest in the soil he tills." What inducement has the tenant-at-will to make improvements? Possibly, his landlord may not advance his rent in proportion to the improvements made; but *three chances out of four*, this will be done. Adam Smith says, in England, the tenant has for his labor, the *smallest fraction* whereby he can live—and whoever suspected Yankee landlords of being more generous than Englishmen? Generosity is not a marked trait of character, in this land, in those who hold the title to large possessions. Generally, it is found in the *inverse ratio* of their possessions. I would sooner hope for a favor from the honest laborer, who earns a support for his family and himself by his daily toil, than from the conceited proprietor of many acres, who lives by the industry of others. In this free country, no man is fit to live, who is not willing to work for a living.

It was sagaciously remarked, by the late John Randolph, of Virginia, "The time will come ere long, when masters will run away from their slaves, and be advertised in the newspapers."

This wise saying was based on the fact, that those who tilled the soil in Virginia, and other slave-holding States, had no personal interest in the soil they tilled. How important then, so to advance the conditions of every efficient laborer, that he may entertain the well-founded hope of being an *independent free-holder*, and of leaving to his children and children's children, the direct benefits of his labor!

LEGISLATIVE AGRICULTURAL MEETINGS.

NINTH MEETING—TUESDAY EVENING, MARCH 22, 1852.

The ninth meeting of the season was held at the State House on Tuesday evening, Mr. BROWN, of the *Farmer*, in the chair.

The subject of the "*Preparation and Application of Manures*" was taken up, and continued through the evening.

Mr. BROWN, upon taking the chair, alluded to a report of discussions in the *New York Farmer's Club*, strongly corroborative of the remarks made by him at the last meeting in regard to the waste of manures. It appeared by statements made by Mr. ROBERT L. PELL, of Ulster Co., that the nitrogen contained in the excreta of one person would grow, in combination with the aid of the ammonia, phosphates and sulphates obtained from the atmosphere, 800 lbs. of wheat per year—at which rate the population of Boston (15,000) might furnish sufficient to raise 120 million pounds of wheat yearly. Add to this a small quantity of ashes and bone dust, and with the natural resources of the farm we could bring up our lands to an amazing degree of fertility. Mr. Pell stated that he had put 40 cords of cattle manure on an acre of land, costing \$80. By removing the liquid from the ordure, and using the nitrogen only, sixteen pounds, worth fifty cents, would be of equal benefit, and \$80 worth of this latter would enrich 160

acres. The solid and liquid manuring substances produced in factories of various kinds in our cities, with the sewerage, &c., is equal to one ton for each inhabitant. Allowing the same calculation for Boston, it would give 150,000 tons per annum. In addition to this, 150,000 tons of street dirt, ashes, &c., might be saved every year, the whole furnishing valuable fertilizing matter worth at least \$150,000. Mr. PELL suggested the erection of reservoirs, with buildings over them, at the terminations of the sewers, for the purpose of collecting the rising gases, and crystalizing them by chemical process for agricultural purposes.

Mr. CLARK, of Waltham, read extracts from several letters from gentlemen in the Southern States, going to show the value of guano both as a temporary and permanent manure. Mr. Clark entered into a calculation of the comparative cost of dressing an acre of land with guano and with manure. 20 loads of manure are about 6 cords, which at \$7 per cord, amounts to \$52. This would manure, not very heavily, one acre. 300 lbs. of guano will manure about equally with 6 cords of manure, and at \$50 per ton, would cost \$7.50. It therefore costs \$42 to dress an acre with barn-yard manure, and only \$7.50 with guano—leaving a difference in favor of the latter of \$34.50. And if the expense of applying the two is taken into the account, the difference will be still greater in favor of guano. It is said that guano is not so permanent in its effects on the soil, but this is not so certain. Experiments have not yet been made on a scale of sufficient magnitude or accuracy to test this point thoroughly. Many experiments, if they can be relied upon, prove that the effects of guano are as lasting as those of manure. Mr. Clark thought that it might be used with very great advantage.

Mr. FRENCH, of Braintree, made some remarks in relation to the great attention paid to the subject of manuring in Europe. In Great Britain he said, \$300,000,000 worth of fertilizing matters are used annually. He considered it a very important matter that measures should be taken to secure the benefit of the vast amount of manure which is wasted annually in our cities and about our farms. The occasional failure of guano, he believed—was owing to a misapplication. He related a case of some gentlemen who bought up a lot of extremely poor land, paying only one dollar per acre for it, which they manured with guano, and the first year cleared the land, paid all the expenses of cultivation, and had a surplus besides, as the result of the operation. This he believed was owing to a judicious application of the guano, a point on which we are without accurate information, and which is much needed.

Mr. WALKER, of North Brookfield, inquired if Mr. FRENCH had had any experience in applying guano to pastures or grass lands. He thought if

guano could be advantageously applied to pasture lands it would be a great benefit to the commonwealth. In Worcester county, for instance, there were pastures that had been used for 150 and perhaps 200 years, without being replenished, owing to the expense and difficulty of conveying barn-yard manure on to the hills.

Mr. FRENCH replied that he had had no experience in applying guano to pastures, but had used it on grass lands with decided benefit. He pulverized it and spread it broadcast in June, while raining gently.

Col. FAULKNER, of Acton, expressed the opinion that one-quarter of the value of barn-yard manure was wasted by the manner in which it was put out. He conceived the best plan to be to heap it up before warm weather, covering it up closely, by putting sawdust or plaster over it, which will prevent the fertilizing gases from escaping. He believed that this process brought it into a form nearly akin to guano, and he thought made it almost, if not quite, as valuable. If guano were treated in the way the bulk of our domestic manure is, it would be worth no more than that is. He believed that manure plowed into land in a green state lost one-fourth of its value by the working off of its nutritive gases. He considered the great cause of sterility in pasture lands to be in overstocking them, by which the grass blades were fed too closely. Grass blades which were apparently dead nearly to the roots in the fall, renew themselves very rapidly in the spring, becoming perfectly green in a few days of favorable weather. Hence, if not fed too closely, a pasture will maintain its vigor and fertility for many years.

Mr. CLARK, of Waltham, said, that having a very unproductive pasture, he took half a ton of plaster of Paris, and spread it on ten acres; and during the whole season he could see a great difference between that part of the land which received the plaster, and that which did not.

Mr. FRENCH thought the case must be an exception. He did not think plaster would be applied with advantage on lands near the seacoast. It may do better at a distance from the sea breezes, where the cattle need saline matter. But the Shakers at Canterbury, say that plaster has no effect on their land. If any one was disposed to use it he would advise the trial of a small quantity at first, as he considered its use of very doubtful expediency. We read that lime is an excellent article; he had heard of an instance where a man bought 200 casks, which he put into his barn-yard and his hog-pens, and the result was, it smelt very strong, which led him to anticipate great benefit from its use; but he was in error, for the valuable qualities were passing off, and he probably lost all his lime, and all his manure. These mistakes are continual; and we shall not get right till

we have some farm where experiments can be tried, which people can visit and ascertain the results. Individuals cannot do this work.

Mr. EMERSON, of Boston, inquired the effect of plaster on pasture lands covered with moss.

Col. FAULKNER replied that on a pasture more than a hundred years old, covered on the north side and on the top of the Indian hills with white moss, he had applied plaster and brought the land into clover the second year. It also eradicated the red moss on the low lands, and the hardhack was also gone, which he attributed to the action of the plaster.

Mr. WALKER said the effects of plaster could not always be seen the first year. He had used it three successive years on a piece of land, and did not perceive any considerable result from it until the third year.

Rev. Mr. TRASK, of Fitchburg said that plaster, if applied under the earth, would in his opinion, be of great benefit. He had tried it on land some 60 or 70 miles from the seacoast with good success, particularly on potato crops, and believed that it might be applied with success near the seaboard, if we could only obtain the *rationale* of the matter, so as to use it intelligently.

Mr. BROOKS, of Princeton, made some remarks in relation to guano. He said he did not think that farmers generally could afford to purchase foreign manures, but should get a full supply from their own farms. He did not believe that farm manures would cost the farmer so much as guano. He thought that 25 per cent. of the products of a farm could be sold, and then leave sufficient to keep it in a fertile condition. He made all his own manure, and kept a year's supply always on hand. If a man sells all his crop he must buy manure. It will pay in extensive farming near cities, but not in extensive farming away from them. The gentleman considered the criterion in using plaster to be, whether the land will produce clover. He applied about 100 pounds to the acre. Mr. BROOKS related a course he had pursued with green manure in raising cabbages. He took 4 bushels of green cow offal, 4 bushels peat muck that had laid a year, one bushel of ashes, one bushel of hen manure, and half a bushel of plaster. He put it on 800 plants and raised 800 heads of fine Savoy cabbages weighing 3 to 8 lbs. each. It operated exceedingly well.

Mr. COLLAMORE, of Pembroke, had seen plaster applied with effect, and thought more depended on the soil than on the location. In Plymouth county no effect is seen from its use except on potatoes. Farmers there think it does not pay to apply plaster to their lands.

Mr. SMITH, of Hadley, said he had used plaster for a great many years. Applying 100 lbs. to the acre for a few years he found to produce a sensible effect, but when continued for a series of years

without other manures it loses its efficacy, and it becomes necessary to apply animal or vegetable manures.

Mr. FAULKNER said he found the use of plaster to produce the same effect from year to year. In Framingham he had known it to be applied for fifty and seventy years with good effect. He said he had commenced using oyster shells upon his land, grinding them somewhat coarse. He applied them to cabbages with excellent effect, putting half a gill around each plant. He also found it a complete protection against bugs on his squash and cucumber vines.

Mr. EMERSON, of Boston, offered some remarks in relation to preserving the gases of manure, and at the same time protecting cattle from breathing its noxious exhalations, and hay from becoming scented by them. He detailed a plan, to dig a pit under the back side of the barn, into which to throw the manure, the pit being made and kept tight, with a pipe or box leading to the ridgepole of the barn to convey off such gases as must find vent.

The meeting adjourned at half-past 9 o'clock.

AGRICULTURAL BOOKS.

Below we give a list of agricultural books published by C. M. SAXTON, N. Y. These are only a small portion of the excellent works issued by that enterprising publisher. They are the exponents of other men's minds, and embody the experiments and practices of persons distinguished alike for their knowledge and successful operations in the matters of which they treat. We recommend one or all these books to every farmer in the land. All farmer's clubs should have them.

	PRICE.
The Complete Farmer and Gardener.....	\$1.25
Johnston's Agricultural Chemistry.....	1.25
The Progressive Farmer, by Prof. Nash.....	.50
The American Muck Book.....	1.00
Rural Architecture.....	1.25
The Young Gardener's Assistant.....	1.50
Fruits and Fruit Trees of America.....	1.25
Rogers' Scientific Agriculture.....	.75
Farmer's Companion, a most excellent work by Judge Buel.....	.75

ALLEN ON THE GRAPE VINE.

The inquiry was made of us the other day, "Where can a good treatise on the grape vine be found?" We find on our table this morning, a beautifully printed work with the following title: "A practical treatise on the culture and treatment of the Grape Vine, embracing its history, with directions for its treatment, in the United States of America, in the open air, and under glass structures, with and without artificial heat. By J. FISK ALLEN. C. M. SAXTON, Agricultural Book Publisher, 1853. Third edition—enlarged and revised." This is just the book which every person needs who wishes to attend to the cultivation of grapes. Beside this, it is a comfort to read Mr. SAXTON's books, because they are printed in the

right form, and have such large and clear type. It is also handsomely illustrated, and has a good index!

For the New England Farmer.

CONCORD FARMERS' CLUB.

At the meeting on the evening of Feb. 24th, the subject for discussion was farming implements. SNOW BROWN, Esq., gave a very interesting historical sketch of the origin of the plow, and of the gradual improvement in the mechanism and construction, from the earliest plow used on the banks of the Nile, down to the beautiful and polished instruments in use at the present day. This sketch was illustrated by 10 plates, drawn for the purpose, exhibiting the forms of various Egyptian, Grecian, Roman, Italian, Saxon and American plows. The first was a simple crooked stick bound by willow thongs to a rough beam. There were plows with coulters and without them—with mould-boards and without them, with wheels and without them. His remarks upon the progress of mechanical skill manifested in their structure, and upon their capacity to answer the purpose for which the plow is designed, were instructive as well as entertaining, and indicated a thorough knowledge of the whole subject. There was matter enough in a condensed form, in the remarks which he made, to make a most interesting lecture of an hour long. And the wish has been expressed by more than one member of the club, that he would expand his material into a lecture for the benefit not only of the Concord Farmers' Club, but of all other agricultural associations, that may be so fortunate as to secure his services. J. RETNOLDS, M. D., Sec.

For the New England Farmer.

BONE WENS.

MR. EDITOR:—I wish to inquire through your paper if there is any cure for the bone wen, so called, that grows on the under jaw of cattle. I had to nearly sacrifice a valuable heifer last fall in consequence of one of them, and one of my neighbors now has a cow which he will probably have to lose. If any of the readers of the *Farmer* know of a remedy that they have tried and found to be effectual, they will confer a great favor by making it known, as it may be the means of saving many a valuable animal. J. A. S.

Colebrook, Ct., 1853.

COOKED FOOD FOR COWS.—Mr. James S. Hubert lately stated before the Philadelphia County Farmer's Club that he had proved by actual experiment in feeding 12 cows 180 days upon cooked food, that he made a net gain of \$32. In place of 20 lbs. of hay per day, formerly fed raw, he now feeds 12 lbs. cut and steamed. With this he mixes 4 1-2 quarts of shipstuf, Indian corn meal and oil cake meal, in about equal portions. This with the hay, weighs about 46 lbs. when cooked, having gained 21 lbs. by that process. He says it is not only more economical, but more palatable to the cattle; they eat without waste and keep in better condition. His steaming apparatus cost \$25, which he more than saved in six months feeding. He considers however, the greatest gain is in the health of the animals.—*N. Y. Agricultor.*

Ladies' Department.

HOW TO TOAST BREAD.

Chestnut brown will be far too deep a color for good toast; the nearer you can keep it to a straw-color, the more wholesome it will be. If you would have a slice of bread so toasted as to be pleasant to the palate and wholesome to the stomach, never let one particle of the surface be charred. To effect this is very obvious. It consists in keeping the bread at the proper distance from the fire, and exposing it to a proper heat for a due length of time. By this means the whole of the water may be evaporated out of it, and it may be changed from dough, which has always a tendency to undergo acetous fermentation, whether in the stomach or out of it, to the pure farina wheat, which is in itself one of the most wholesome species of food, not only for the strong and healthy, but for the delicate and diseased. As it is turned to farina, it is disintegrated, the tough and gluey nature is gone, every part can be penetrated, it is equally warm all over, and not so hot as turn the butter into oil, which, even in the case of the best butter, is invariably turning a wholesome substance into a poison. The properly toasted slice of bread absorbs the butter and farina are in a state of very minute division, the one serving to expose the other to the free action of the gastric fluid in the stomach; so that when a slice of toast is rightly prepared, there is not a lighter article in the whole vocabulary of cookery.—*Household Almanac for 1853.*

FEMALE WOMEN.—We respect, admire and love a female woman. We admire her in the beauty of her person, her moral presence and position; we respect her simple truthfulness and innocence, and we love her as the embodiment of the highest charms and sweetest attributes of humanity. But a male woman, who can bear! We cannot read of monster meetings, in which women perform the leading parts; of lectures on the subject of marriage, to promiscuous audiences by female tongues, and of the perambulating female spouters who go about the country, without an involuntary emotion of disgust. Many of these women are mothers, who have families of tender age at home, and husbands who should have tender heads. Home duties forsaken, and the misguided mistresses go about teaching other people *their* duties! What comfortable wives they must be! What kind and assiduous mothers! How they must hallow a home that is too small to hold them! Gods of War! We would as soon live with a hyena or a steam engine. Don't come this way, we beg of you.—*Springfield Republican.*

Boy's Department.

HOW TO MAKE CRAYONS.

Every school-room has, or should have, blackboards. On these, chalk is almost universally employed. There are many objections to the use of chalk, not the least of which is, that after a problem is performed, the finger and clothing present a *dirty white* appearance. Crayons are far preferable. Could they be generally employed, it would be a favor done to some delicate hands,

to say nothing of a large amount of wearing apparel.

White crayons may be made of Paris white, or Spanish white, which are nearly the same, and wheat flour and water. The correct proportions are five pounds of Paris white, one pound of flour, and sufficient water to make a dough of these materials, hard enough not to crumble, and soft enough to roll. Little balls of this are then rolled out into cylinders about the size of a pipe-stem, and laid away in a warm place, or in the sun, to dry; the drying will generally require from twelve to twenty-four hours.

The process of rolling may be performed upon a table, or any flat board. This process will be expedited somewhat, and the crayons be of a more equal size, if a rolling-board be employed; which is simply a strip of board, say a foot in length, and eight or ten inches in width, with a handle on the top, and with the edges upraised about a third of an inch in thickness on the side of the lower surface, on which it may slide back and forth, as the crayons are rolled. With an apparatus simple as this, crayons may be made with great rapidity and cheapness. Every school contains some lad possessing skill enough to manufacture them with ease. The expense is trifling, scarcely greater than that of chalk, while it is far superior.—*Massachusetts Teacher*.

SAVE YOUR EARNINGS.—The practice which apprentices, clerks, and others, have of spending their earnings as fast as they accumulate, is one great reason why so many never attain a position above mediocrity in life. A person who receives but a small compensation for his services, will with a little care over his exchequer, and a system of regularity in his expenditures, find that at the end of the year he is prepared to encounter any emergency or mishap. But, as a general thing, they manage to get rid of their earnings quite as quick as they are due, thus leaving them wholly unprepared for emergencies, by sickness or otherwise. A system of curtailing unnecessary expenses, if adopted by our younger folks, would bring around the most happy and gratifying results, and be the means of raising to eminence and standing in society, many who now have contracted the habit of parting with their earnings so readily and foolishly—for the habit of keeping continually in debt, begets indifference and dissipation, a lack of self-respect, and an utter disregard for future prospects. The real cause for a great deal of crime may be traced to the habit of a foolish expenditure of money in early days.—*Albany Transcript*.

Farm to be Let.



That well known farm in the southerly part of West Cambridge, called the "PERRY FARM." It consists of about 100 acres, divided into orcharding, tillage and pasture, and is at present cultivated as a milk and fruit farm. The buildings, &c., are sufficient and in good order.

For terms and particulars, please apply to WM. MAPLEDEN, on the premises.

Feb. 26.

(P)

Bound Volumes.

BACK VOLUMES of the NEW ENGLAND FARMER, elegantly bound in Maslin, Gilt and Embossed, are now for sale at this office.

Advertising Department.

A limited number of advertisements of an appropriate character will be inserted in the monthly Farmer at the following

RATES.

For one square of 15 lines, one insertion.....\$1.00
For each subsequent insertion.....50

The above rates will be charged for all advertisements, whether longer or shorter.

A. L. Bingham's Third Annual Sheep Shearing Festival.

THE undersigned gives notice that he will hold his Third Annual Sheep Shearing Festival, at the well known resort of James K. Hyde, in Sudbury, Rutland County, Vermont, on the first and second days of June next, commencing at ten o'clock A. M. He proposes to shear publicly, from fifty to one hundred French Merino Ewes, with a view to enable all interested in this branch of production, to see and judge for themselves of the weight and value of these sheep as compared with others. All wool growers, and manufacturers are respectfully invited to attend. Several very superior Bucks and Ewes, of the best French importations and stock, will be on exhibition and for sale. A number of gentlemen largely interested in the celebrated Black Hawk and other Morgan Horses, have signified their intention to avail themselves of the occasion to exhibit a splendid collection of the best horses in Vermont.

West Cornwall, Vt., April 1, 1853.

A. L. BINGHAM.

Garden Seeds.

WE respectfully solicit the attention of purchasers of GARDEN SEEDS to our extensive stock, which we offer for sale. We have all the sorts of Vegetable Seeds that have proved worthy of cultivation; also, Grain, Grass and Flower Seeds. All the varieties are raised and selected expressly for our trade, and we do with confidence recommend them to all who desire to procure seeds that will prove true to their names.

Catalogues gratis, on application.
RUGGLES, NOURSE, MASON & CO.,
Over Quincy Market, Boston.

Jan. 1.

Clover and Grass Seeds.

NORTHERN Herds Grass.
Western Herds Grass.
Northern and Southern Red Top.
Northern, Western and Southern Red Clover.
White Dutch Clover.
Orchard Grass.
Kentucky Blue Grass.
Fowl Meadow Grass, &c. &c.
All of the growth of 1852, and of best quality. For sale by
RUGGLES, NOURSE, MASON & CO.,
March 26, 1853. Over Quincy Market, Boston.

Bridgewater Nurseries.



The subscriber offers for sale, cheap for cash, a large assortment of Fruit and Ornamental Trees, Shrubs, Roses, Herbaceous and Greenhouse Plants, Currants, Quince, Strawberries, Gooseberries, Raspberries, Grape Vines, Bulbous Roots, and Hedge Plants. Everything in the nursery line will be supplied upon short notice. All orders promptly executed.
EBENEZER GAY.
Bridgewater, March 26, 1853.

3m*P

Hens, Turkeys and Geese.



The subscriber offers for sale a few pairs of the following choice breeds of poultry. White and Buff Shanghaes, Gold and Silver Spangled Poulards, Bolton Gray and Black Spanish; also, Virginia Turkeys and Bremen Geese. These fowls are of the purest blood, most of them being bred from stock recently imported, and very handsome. They will be sold low if applied for soon. For further particulars, address post-paid,
H. H. LITTLE, East Marshfield.

Feb. 19, 1853

(P)

Wanted,

A SUITABLE MAN AND WIFE to Superintend the affairs of the Poor Farm, in the town of Concord.
Apply to the Overseers.
March 26, 1853.

AGRICULTURAL WAREHOUSE AND SEED STORE, QUINCY HALL, OVER THE MARKET, BOSTON.

THE Proprietors having recently enlarged their Warehouse, and increased their works at Worcester, would respectfully invite the attention of Planters and Dealers in AGRICULTURAL & HORTICULTURAL IMPLEMENTS, GARDEN and FIELD SEEDS, &c., to their stock, comprising the largest and best assortment to be found in the United States, which are offered at low prices.

OF PLOUGHS—we have the greatest variety of kinds and sizes.

Improved Rod Ploughs, for flat furrows—Improved Scotch Ploughs for lapped furrows—Improved Stubble Ploughs, which are especially adapted to deep tillage, or varying from 6 to 12 inches in depth.

Self-sharpening, Hill Side, Sub-soil, Double Mould, Corn, Cotton and Rice Ploughs.

Cylinder Hay Cutters, Smith's Patent Lever Gate, and others. Patent Corn Shellers, with and without Separators. Seed Sowers, of various sizes and prices. Batchelder's patent Corn Planter, improved. Fanning Mills of various sizes. Horse Powers, Threshing Machines, thermometer Churns, Robbins' patent Centrifugal Churn, Cylinder Churn, Dash Churn, Corn Planters, together with almost every article wanted on the Plantation, Farm or Garden.

Illustrated Catalogues sent gratis on application, post paid
RUGGLES, NOURSE, MASON & CO.
Boston and Worcester, Mass., Jan. 1, 1853

Highland Nurseries, Newburgh, NEW YORK.



A. SAUL & CO., in inviting the attention of their patrons and the public in general, to their very extensive collection of FRUIT AND ORNAMENTAL TREES, SHRUBS, &c. &c., would respectfully inform them that the stock which they offer for sale the coming spring is unusually fine, both as regards quality of trees, variety of kinds, &c., &c.

The soil and climate of our Hudson Highlands have rendered proverbial the success of the trees sent from here to all parts of the union, and the accuracy and precision so indispensable in the propagation of fruit trees, for which this establishment has long been celebrated, render errors in nomenclature of rare occurrence.

They have propagated in large quantities, all the leading standard varieties, which are proved best adapted for general cultivation, especially those recommended by the American Pomological Society; as well as novelties of both native and foreign origin.

To particularize within the limits of an advertisement would be impossible; they refer to their general catalogue, a copy of which will be sent to all post-paid applicants, on enclosing a post office stamp.

The following comprises a portion of their stock, and are all of fine growth, viz:

Pears in over 400 varieties, both standards on their own stock for orchard culture, and on the Quince for Dwarf, Pyramids, and Quenoucle, for garden culture.

Apples in over 300 varieties, both standards and dwarfs; also, Cherries, both standards and dwarfs; Plum, Apricot, Peach Nectarines and Quince trees in every variety.

Grape Vines, (both native and foreign, for vineries;) also, Gooseberries (50 best Lancashire varieties)

Currants, Raspberry and Gooseberry plants of all leading and known kinds, together with Sea-kale, Asparagus and Rhubarb roots.

Ornamental Trees, Shrubs and Vines, both deciduous and evergreen, suitable for street and lawn planting, embracing all the new and rare Conifers, Weeping Trees and Shrubs of recent introduction.

Roses in every variety, including Hybrid perpetual, Hybrid Bourbon, Hybrid China, Hybrid Damask, Prairie, Boursoit, Ayrshire, and other hardy climbing and garden varieties, as well as the more tender, Tea, China, Bengal, Bourbon, and Noisette varieties.

Herbaceous plants, a large collection of Peonies, Phloxes Campanula, Penstemon, Cineraria, &c. &c.

Dahlia and bedding plants for the parterre and flower garden, in large quantities and variety.

Hedge Plants, 100,000 Buckthorn and Osage Orange Plants, two years growth, Arbor Vitis for screens, &c., &c.

Dealers and planters of trees on a large scale will be dealt with on the most liberal terms.

Newburgh, Feb. 26, 1853.

5m

Grafting Wax,

A FIRST-RATE ARTICLE, made by an experienced Fruit Grower, for sale by
RUGGLES, NOURSE, MASON & CO.,
March 26, 1853. if Over Quincy Market, Boston.

Valuable Potatoes for Sale.

THE subscriber offers the following valuable potatoes for sale. A particular description of some of them will be found in the last volume of Transactions of the N. Y. State Agricultural Society for 1851. This society awarded him a special premium at the State Fair at Utica, and also voted him \$100 at their meeting at Albany during the present month, as encouragement in these experiments.

No. 1. *Rough Purple Chili*, imported in April, 1851, at a great expense. For yield, hardiness, and table quality it has no equal. Price \$10.00 per bushel. This potato yielded me last year, ninety-two from one by measure; while to Mr. Delafield, of Geneva, it yielded one hundred and twelve from one by weight.

No. 2. *Seedlings originated in 1849*. They are hardy, productive and good for table use. Price \$7.00 per barrel, or \$3.00 per bushel. Many of these have been tested this year under the eye of the State Society, and yielded from twenty to sixty four from one, by weight.

No. 3. *Seedlings of 1852*. These consist of many choice kinds selected from 4200 varieties, and consisting of eleven different families. They were selected with especial reference to hardiness, fine flesh, yield and mode of growth in the hill. They afford a basis for the entire renewal of the potato crop in our country. Price \$10.00 per bushel.

No. 4. *Potato Seed from the seed-ball*. These seeds consist of two kinds,—that produced by No. 1, and the choice sort in No. 2, above,—and are the same that produced the seedlings of 1853,—No. 3, above. As they have thus been tested so they are warranted to produce a large proportion of hardy, productive and shapely tubers.

Price \$1.00 per paper, the paper to contain more than 1000 seeds, to be sent to the purchaser by mail, post paid, and accompanied with directions for cultivation.

Each parcel of tubers ordered, will be put up with cases, the different sorts kept separate, and the whole forwarded to the directions of the purchaser by express, railroad, canal, or as otherwise directed, as soon as the weather will admit, and at the expense and risk of the purchaser.

Purchasers are advised to take No. 1 and 2, for immediate field crops, and No. 3, as a source of new and valuable sorts.

Persons passing through Utica, are requested to call and see specimens at the store of WM. BRISTOL & CO., 108 Genesee Street, or at the residence of the subscriber near the Insane Asylum.

All orders answered only for cash.

REFERENCES:—

The officers of the N. Y. State Agricultural Society.
B. P. Johnson, Cor. Sec'y of do., Albany, N. Y.
Hon. I. Delafield, Geneva, N. Y.
I. F. Fogg, Agricultural Ware House, Rochester, N. Y.
Wm. Bristol & Co., Druggists, Utica, N. Y.
Charles Tracy, Esq., New York City.
C. L. Whiting, Granville, Ohio.

C. E. GOODRICH.

Utica, N. Y., March 1.

2m

Sale of Short Horned Cattle.



I will sell by auction, at my residence, on WEDNESDAY, 8th June next, at 1 o'clock P. M., about thirty thorough bred Short Horned Cattle. About twenty of them are Cows and Heifers, the remainder young Bulls. Nearly every animal are the produce of the Imported Bull "YORK SHIREMAN" and 3d "DUKE OF CAMBRIDGE," bred by the late Thomas Bates, Esq., of Kirkcubbin, England, and "EARL OF SHAHAM" and "VAN TEMPEL," bred by John Stephenson, Esq., of Durham, England, and are of his famous Princes family.

The upset prices of these animals will be from \$150 to \$300, as to age, &c., &c.

I will also offer the above named Imported Bull, "Van Tempeel,"—his upset price is \$1000.

Terms—Cash, on satisfactory notes at three months, payable at the Bank of Auburn, with interest.

I will also have for sale at that time a few South Down Rams and Suffolk Pigs.

Catalogues will be ready about 15th March next, and will be found with

A. B. Allen, Esq., 89 Water Street, New York.
Sanford Howard, Esq., Cultivator office, Boston.
Luther Tucker, Esq., and B. P. Johnson, Esq., Albany.
L. F. Allen, Esq., Black Rock.
M. B. Bateham, Esq., Columbus, Ohio.
W. T. Dennis, Esq., Richmond, Indiana, and with the subscriber.
J. M. SHERWOOD.
Auburn, N. Y., March 12, 1853.

Seelons,

SUPPLIED in large or small quantities, by
JAMES HYDE & SON.
N. B.—Orders should be sent as early as possible.
Newton Centre, Mass., Feb. 19, 1853.

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Morgan Stock Horse for Sale.



For sale by the subscriber, a Morgan Colt, 4 years old last May, weight 1125 lbs., the best model of his Sire (the Green Mountain Morgan owned by Hale) that could be found in New England; his color and action, his temper, and gait, are like the old horse and he is reputed to be the best roadster of the whole race of Morgans. C. W. BELLOWES.
Pepperell, Mass., March 12, 1852. On Nashua and Worcester Railroad. *if March 12.

New Garden Seeds.

EARLY and Late Peas of high and low growth, Dwarf and Climbing Beans, Cauliflower, Cabbage, Lettuce, Cucumber, Radish, Squash, Turnip, and other sorts of Vegetable Seeds. Flower seeds in great variety, Early and Late Potatoes, &c., for sale in large or small quantities by
RUGGLES, NOURSE, MASON & CO.,
Over Quincy Market.

Boston, March 26, 1853.

Whale Oil Soap,

FOR SALE, in large or small quantities, by
RUGGLES, NOURSE, MASON & CO.,
March 26, 1853. *if Over Quincy Market, Boston.

Spring Seed Grain.

BLACK Sea Wheat,
Bald Club Wheat,
Barley,
Buckwheat,
Millet,
Spring Rye,
For sale by RUGGLES, NOURSE, MASON & CO.,
March 26, 1853. *if Over Quincy Market, Boston.

Dutton Field Corn,
Whitman Field Corn,
Canada Field Corn,
Golden Field Corn,
Sweet Corn, (for fodder.)
Oats, &c. &c.
Over Quincy Market, Boston.

NEW ENGLAND FARMER

Is published on the first of every month, by JOHN RAYNOLDS and JOEL NOURSE, at Quincy Hall, South Market St., Boston.

SIMON BROWN, Editor.

FREDERICK HOLBROOK, } Associate
HENRY F. FRENCH, } Editors.

☐ Terms, \$1.00 per annum in advance.

☐ All subscriptions to commence with the volume, Jan. 1. The FARMER, is devoted exclusively to Agriculture, Horticulture, and their kindred Arts and Sciences; making a neat volume of 576 octavo pages, embellished with numerous engravings. It may be elegantly bound in muslin, embossed and gilt, at 25 cts. a volume, if left at the office of publication.

☐ Also published at the same office every Saturday, on a large handsome folio sheet, the

NEW ENGLAND FARMER, (WEEKLY,)

An Independent Agricultural Family Newspaper.

The News and Miscellaneous departments under the charge of WILLIAM SIMONDS, will include a full and careful report of the news of the Markets, and the news of the week, such as Domestic, Foreign and Marine Intelligence, Congressional and Legislative proceedings, Temperance and Religious Intelligence, and a general variety of Literary and Miscellaneous matter, adapted to family reading, comprising more useful and valuable reading matter than any other Agricultural Newspaper published in New England. Everything of a hurtful or even doubtful tendency will be carefully excluded from its columns.

☐ Terms \$2.00 per annum in advance.

The monthly contains nearly the same matter as the Agricultural department of the weekly.

☐ Postmasters and others, who will forward four new subscribers on the above named terms, for either publication, shall receive a fifth copy gratis for one year.

☐ All orders and letters should be addressed, post-paid,

RAYNOLDS & NOURSE,

QUINCY HALL, SOUTH MARKET STREET, BOSTON.

☐ POSTAGE.—The postage on the New England Farmer, monthly, is 14 cents per quarter, or 6 cents per year, to any part of the United States, to be paid in advance at the office where the same is received.

Walnut Grove Nursery.



The subscribers would respectfully inform their friends and the public, that they have on hand an unusually large stock of Apple, Pear, Plum, Cherry, Peach, and other Trees.

Also, Quinces, Currants, Raspberries, Grapevines, &c., &c.

Ornamental Trees, and Shrubs, Buckthorn Plants, &c. &c.

Lot of Seedling Horse Chestnut, two years old.

Lot of European Sycamore, two years old.

Good plants of the new and improved high bush Blackberry, the fruit of which is of enormous size.

Fine Apple Trees, three to five years' growth from bud, seven to nine feet high, \$25 per hundred.

Also, a fine lot of Norway Spruce, good size.

We devote ourselves solely to the raising of trees; they receive our strict personal attention; we are therefore able to warrant every article true to name.

Those who intend purchasing large quantities of Apple Trees are respectfully invited to call before purchasing, and examine our stock, as it is large, and doubtless unsurpassed by any in the vicinity.

Trees delivered in Boston free of expense, packed if desired. Catalogues sent to post-paid applicants. All orders thankfully received and promptly executed.

JAMES HYDE & SON.

Newton Centre, Mass., March 26, 1853.

8w*2

Super-Phosphate of Lime,

IN bags and barrels, made by C. B. DEBURG, a warranted pure and genuine article, with full directions for use. For sale by GEO. DAVENPORT, 5 Commercial, corner of Chatham St., Boston, agent for the manufacturer.

Also, for sale, Ground Bone, Bone Dust, Burnt Bone, Guano, and Grass Seeds of reliable quality.

March 26, 1853.

*if

Seed Potatoes,

EARLY AND LATE SORTS, for sale by
RUGGLES, NOURSE, MASON & CO.,
March 26, 1853. *if Over Quincy Market, Boston.

RAYNOLDS & NOURSE, PROPRIETORS.
OFFICE...QUINCY HALL.

SEMON BROWN, EDITOR.

FREDK HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

CALENDAR FOR MAY.

SWEET MAY—

For thee, the fragrant zephyrs blow,
For thee descends the sunny shower;
The rills in softer murmurs flow
And brighter blossoms gem the bow.

So sang DARWIN, and scarcely a poet but praises, or describes, or alludes to the beauties of this month. He sings it as the offspring of the solar beams, and invites it to approach and receive the greetings of the elemental beings.

The year awakes from her winter nap in April; but she only gets half awake, and does not seem to feel certain whether it ought to be winter or spring! So she gives us a touch of both seasons—now fierce and cold winds, and then balmy airs; snowing clouds and soft sunshine; now hail and snow, then soft, pattering rains, washing the face of the fields, and bringing out a bright color here and there in her new dress.

But MAY unfolds unnumbered charms. She spreads the earth with green, and dots it with flowers of varied hue; fills the trees and shrubs with bursting buds and expanding blossoms, and loads the air with fragrance. All is activity and love in lovely May! Fair maidens and bounding youth skim the hills, the margin of the winding brooks, and sheltered nooks in the wood, for early flowers. As the expanding flowers, so expand their beating hearts, and knit in holy love, they ripen together here for a still lovelier MAY-DAY in the skies!

The elms and maples that for a week or two have held their pendent tassels, and invited whole colonies of bees to taste their sweets, now scatter innumerable seeds, and go on with their work of growth. The robin is here, and the blue-bird, the early swallow, the wren, the warbling sparrow, chattering black-bird, and lark, and occasionally

... "all burst forth in choral minstrelsy,
As if one gale and sudden gale had swept
An hundred airy harps."

But MAY is too busy a month to afford us much time in a description of its beauties. It is as

crowded with active duties for the husbandman, as it is active in vegetable and animal life. Lagging will not answer now. Your plans being laid, and your implements in order, you go to work with good nature, with a stout heart and willing hands, and every stroke will tell.

GRAFTING.—There are thousands of old orchards still remaining in New England, which would pay well for being newly worked over by plowing, manuring, pruning, scraping and grafting. If there is a healthy shell of four inches thickness, we consider the tree worth this labor. Many trees where the heart-wood is entirely gone, bear plentifully through many successive years. Fruit may be obtained from old trees in a much less time than it can be from young ones; besides, they are often old friends, have long served us well, and form a pleasant part of the landscape. Do not, then, cut down the old trees. At least, grafted and well tended, they will produce food for your cattle and swine more cheaply than you can produce potatoes, corn or hay.

In grafting, do not cut off all the limbs the first year, in so doing you check its natural force and induce an unhealthy state. Beside, the suitable season for grafting is not the best time for pruning. Therefore cut off only the limbs to be grafted, and leave the others to shelter the young ones through the summer, and prune gradually afterwards.

THE GARDEN.—Examine, carefully, all the trees, shrubs, and plants in the garden, to see that nothing exists to obstruct their growth. Insects may have been sheltered on them through the winter which can now easily be destroyed; or moss may have gathered which must be rubbed off, and the trees washed with soft soap and water.

Sow an abundance of seed for kitchen vegetables; beets, parsnips, carrots, early turnips, lettuce, radish, cabbage, cauliflower, broccoli, also melons of various kinds, and if not done in April, set raspberries, currants, gooseberries and strawberries.

ries. All these fruits are cheaper and more wholesome in hot weather than a principal meat diet. Flesh is stimulating, while fruits are sufficiently nutritious, and are cooling under our hot summer suns.

Screen the garden from the northeast and north-west winds by rows or clumps of pines and cedars, or other evergreens, interspersed with the maple, birch, beech, or oak. This will require no cash outlay to the farmer, and a little done every year will wonderfully improve and beautify the homestead.

PASTURES.—Unless these are extensive and varied, that is hilly, and containing low, moist places, affording very early feed, it is a good plan to keep the cattle from them until the first of June; the grass then becomes more vigorous—the roots gain a firmer hold, and consequently continue stronger through the season. Pastures fed close early in the season are worth but little during the dry, hot months.

SOILING CATTLE.—Sow southern corn this month to be cut green for early fodder. An half acre devoted to this purpose will help out your pastures wonderfully—and the increased product of your cows more than pay cost of labor. Then continue sowing, weekly, until July, and you will be able to keep up a large flow of milk.

THE CORN CROP.—Remember the old adage,

"When oaks look gray,
Plant right and day."

Plow deep, pulverize and manure well, and then let it be wet or dry, you will rarely fail of obtaining a good crop of corn,—one of the most substantial and profitable crops of New England. We have retained, in our practice, many of the English modes of cultivation, and among others that of *hilling corn*, and perhaps all the hoed crops. In a climate where moisture is redundant, this practice may prove beneficial; but under our burning suns of July and August, and with the usual drouth attending those months, the practice is evidently a bad one. Let the cultivation be deep, mellow, and level, and we presume the crop will do better on a level cultivation.

Corn is valuable for household purposes, and for every sort of stock; is suited to our climate and most of our soils, and if accurate accounts are kept, will be found a *profitable crop*. We hope more attention will be given it.

ASPARAGUS.—Obtain one or two hundred roots and set them in a trench a foot wide and deep, and a foot apart in the trench. Spread the roots out in their natural position, at the distance of one foot apart on each side of the trench, making two rows in one trench, or 100 plants in 50 feet. This is the plan recommended by Mr. CURTIS, of Pelham, in volume 4 of the *Monthly Farmer*, which may be referred to for a more particular description.

The plant is wholesome, easily cultivated, and a profitable market vegetable.

MAY is an important month to the farmer, as much of his success for the year depends on his operations now. Most of the crops he cultivates must be put in, and their value will depend considerably upon the time and manner of doing it. He that would get the best return for the least labor, must work *seasonably* and *systematically*, and with such thoroughness as to leave nothing undone necessary to secure a good crop.

For the New England Farmer.

PLOWING.

BY A. G. COMINGS.

Who knows how, and when, to plow?

To understand the one simple matter of plowing, is one of the great things necessary to good farming. If there is among all your intelligent readers, a man to be found who knows all about plowing, he ought to write a book for the instruction of the rest of mankind.

In my intercourse with farmers it has become very evident to me that there is no settled and understood theory of plowing. Concerning the time and depth of plowing, every man has his ideas; and there is no common understanding of any settled principle of action, for different soils and the soils of different altitudes, and different inclinations, and different exposures.

There are "a thousand things" to be known about this one important part of the farmer's work.

The different kinds of soil, from the lightest to the heaviest, will vary the necessary work of the plowman. The man who would plow stiff, clay soils, in the same precise manner that he would light, sandy soils, is the man who will perhaps live to learn to do differently.

Those who write about plowing, if I am not much mistaken, take into view too few items. We see but little from the pens of the best writers, except upon the questions of shallow or deep plowing, fall or spring plowing, sod plowing, stubble plowing, subsoil plowing, &c.

If we take up the single subject of fall-plowing, the whole matter requires that we consider the kind of soil, the present state of the soil, how it will be exposed to the frosts of winter, how it will be effected by washing in the spring, how it may be exposed to the action of wintry winds; and in addition to this the farmer is to consider whether the turf will be more readily decomposed and the soil more readily and suitably prepared for use the next season, for the production of the peculiar crop which is desired.

If we are considering spring-plowing, the subject involves a great variety of peculiar points, as to the dryness and warmth of the ground before plowing, how deep each particular piece of ground should at the time be plowed, how the furrows for each different piece should be turned, what kind of a plow will do the work best, what will do it easiest, what will do it quickest, and what plow, considering these points together, should be used; and how should the plowman hold the plow, to secure the best performance in the shortest time and with most ease to himself and his team.

If we are considering the depth of plowing, very many things are to be considered, and ought to be understood. There must be considered, the state of the soil and the amount of manure to be put upon it for an immediate crop, for the production of what may be necessary the first year; the depth necessary for the continued fertility of the soil, the depth necessary for ground much exposed to drought, for land much exposed to wet, for side-hills where heavy rains are apt to wash them, for long-cultivated land which has never been plowed deep, and for land which has never before been plowed. Besides, there is the question between the action of the Subsoil Plow and the Michigan Double Plow.

If we inquire whether furrows should be laid flat and smooth, it must be considered whether the peculiar soil or the peculiar season of the year when the peculiar soil is plowed has any bearing on the question.

All these things, and very many others, have a relation to the subject of plowing.

There are certain fixed laws in nature, which the well-instructed plowman must understand. These are not to be regarded as either accidental or providential. They do not *happen*. They are as naturally to be expected as the moon's changes are. They should therefore be considered and understood.

There are also probabilities to be anticipated by the farmer. These relate to the heat and cold of the seasons—to wet and dry—and to other circumstances which we may call Providential probabilities.

To know how, and when, to plow, requires that a man should be a wise man, a man of understanding, and a real philosopher. Agriculture calls for the services of such men.

Only one out of many among men are acquainted with the reasons in favor of deep plowing. Few consider the difference of soils, and the location and situation of soils, as regards the subject of fall-plowing.

I go to a farmer, and ask his opinion in reference to the practice of fall plowing. He is greatly in favor of it, and is eloquent in advocating the practice. I go to another and find him strongly opposed to the practice. Both are thriving farmers; and each tells me that he has proved his theory by years of practice, in which he has tried both ways. But this does not settle the question. I find that the peculiarities of the soil, and the other circumstances which have an influence upon different soils, quite explain the matter. It is not proven that the practice is useful under all circumstances, nor useless under all.

Farmers have got very much to learn, and whoever understands this matter fully, if any man does, owes to the public something which will open our blind eyes.

If any man will write a book on plowing, and faithfully instruct us on this matter of so much consequence to farmers, I will be glad, if I am alive to see it forth coming, to do all in my power to gain it the support which is due to it.

If there was something like the great and notable hen-fever, as touching the many important things about plowing, the books would come out, "thick as blackberries in harvest time." We should then perhaps hear of plows that could go alone, and do fine work, if they could not talk.

But the men who understand plowing are not the men for such fancy work.

It does really appear to me that the Editor of the *New England Farmer* made a beginning in the History of the Plow, at the late mass meeting, at Concord, which is worthy of being followed by the History and Philosophy of Plowing. Every young farmer wants to know more about plowing.
Mason, N. H.

MILLET.

In the April number of the monthly *Farmer* we gave a short paragraph on the subject of *millet*, to be cut green and dried for fodder. Since that time inquiries have been made which seem to call for more particulars in relation to it as a hay crop.

It has been considerably cultivated in this region by some of the milk producers who pronounce it an excellent article for milch cows and oxen. Their practice has been to sow it,—*eight quarts of seed to the acre*,—from the 10th to the 20th of June. In the accounts quoted below, the quantity of seed used is much larger than is used in this vicinity, and it seems to us more than is necessary. The seed should be sown with great care, sowing both ways across the field, in order to touch all the ground and cover it evenly. The cultivator must exercise his own judgment in regard to the time of cutting.

The seed is highly relished by birds and fowls, is nutritious, and in some countries is made into bread. We copy two or three paragraphs in relation to the cultivation and product of millet from *Fessenden's Complete Farmer*, published by C. M. SAXTON, N. Y.

"Mr. RUDER, of Pennsylvania, sowed one peck to the acre in May, and put in four acres; cut it in the middle of August, and dried it in the sun two or three days. He had seventy-five bushels of seed to the acre, and six tons of fodder on four acres. His cattle relished it very well."

It is stated in the *Plough Boy*, that millet sowed in June, on good ground, will give from two to four tons of fodder, and from twenty to thirty bushels of seed, equal to corn for fattening hogs. It is cultivated in Pennsylvania and Maryland as a fodder crop, and cut in the milk. It is preferred in the winter by neat cattle to clover.

A crop of fodder can be produced if sowed as late as the last of July.

JOHN HARE POWELL, Esq., of Pennsylvania, has given us the following observations on the culture of this crop:

"I have made many experiments on various soils, and at different seasons, to ascertain the product as well as the properties of millet. Upon light land, in good condition, it succeeds well. It requires in all cases fine tilth, and as much strength of soil as is necessary to produce heavy oats. I have not seen either in Europe or America, any green crop which so largely rewards accurate tillage and plentiful supplies of manure, as the species of millet usually grown in this and the adjacent countries. I have sown it from the 1st of May to the 20th of June, and have invariably obtained more fodder than could have been had from any

grass under similar circumstances. On the 1st of May, five bushels of millet seed were sown on four acres; on the fifth of July the crop was hauled, and estimated at four tons per acre. I have obtained this season forty tons from sixteen acres, of which four only had been manured; the remainder could not have borne a good wheat crop. One of the loads was weighed; an account of them was regularly kept; their size was made as nearly equal as possible. I have generally used a large quantity of seed, as not more than two-thirds of that which is usually sown will vegetate. Whilst my own oxen consumed millet in its green state, they performed their work with more strength and vigor than they had done before, or have shown since, except when fed with grain. My cattle, of all ages, prefer it to both red, and the best white clover, meadow, or timothy hay."

The quantity of seed used for seeding and obtained as a crop, is set extravagantly high, in the quotations above. We are assured by those having long experience in the cultivation of millet, that eight quarts is seed enough for an acre.

WELCOME SPRING.

The *Hallowell Gazette*, after some happy reflections upon the delightful season of Spring, makes the following just and applicable remarks.

When we hear a farmer tell about selling his farm, with the intention of changing his business, we are always reminded of Esau. There are some men who seem to have been born for an adventurous life of trade; who seem to enjoy its fluctuations and uncertainties, and consider it sport to run desperate ventures; who can descend from a palace to a hovel, or ascend from a hovel to a palace, with equal indifference to their fate. Let them enjoy it—let them be princes to-day and paupers to-morrow if they will, but, reader, if you are the owner of a farm, sow this spring as in times past your seed; and when the autumn shall come you shall reap your harvest, whatever may be the condition of stocks or the price of cotton, or whether the store of the merchant shall be in his possession or in the hands of his creditors.

Then let us all, with contented mind and hopeful anticipations, hail the approach of spring, remembering that

"Contentment walks

The sunny glades, and feels an inward bliss
Spring o'er his mind, beyond the power o' kings
To purchase. Pure serenity apace
Induces thought and contemplation still
By swift degrees the love of Nature works,
And warms the bosom; till at last sublimed
To rapture and enthusiastic heat,
We feel the present Deity, and taste
The joy of God to see a happy world!"

For the *New England Farmer*.

BONE WINE.

MR. BURTON:—I noticed an inquiry for a cure of bone wens; I have a recipe which I have used, and has effected a cure. Take equal parts of indigo dissolved in wine, and soft soap; apply it quite warm, with a swab, twice or three times a day. This I have tried on a calf six months old, and on a two years old, and effected a cure.

Hanover, 1853.

J. BROWN.

SPECIAL MANURES.

It is said that the employment of manures which are rich in nitrogen not only causes a large crop, but also produces a gain which is much richer in gluten. The experiments which have hitherto been chiefly relied upon in proof of this result are those of HERRNSTADT. On ten patches each 100 square feet, of the same soil, (a sandy loam,) manured in equal weights of different manures in the dry state, he sowed equal quantities, (1 lb.) of the same wheat,—collected, weighed and analysed the produce. His results are represented in the following table:

MANURE.	Ox Blood, 14 fold.	Night Dung, 14 fold.	Sheep's Dung, 15 fold.	Goat's Dung, 15 fold.	Human Urine, 15 fold.	Horse Dung, 10 fold.	Pigeon Dung, 9 fold.	Cow Dung, 7 fold.	Vegetable Manure, 5 fold.	Urine-Manure, 5 fold.
Wheat.....	4-3	4-5	4-5	4-5	4-5	4-7	4-5	4-5	4-5	4-5
Gluten.....	34-5	35-3	35-3	35-3	35-1	35-7	35-3	35-3	35-3	35-3
Albumen.....	1-9	1-5	1-5	1-5	1-4	1-1	1-3	1-3	1-3	1-3
Starch.....	41-3	41-4	40-0	40-1	39-9	41-5	40-5	40-5	40-5	40-5
Sugar.....	1-3	1-4	1-6	1-5	1-4	1-5	1-3	1-3	1-3	1-3
Gum.....	1-8	1-1	1-0	1-0	1-0	1-0	0-5	0-5	0-5	0-5
Fatty Oil.....	0-9	1-1	0-7	0-7	0-9	1-0	1-4	1-4	1-4	1-4
Gen.....	0-5	0-6	0-7	0-7	0-9	1-0	1-4	1-4	1-4	1-4
Soluble Phosphate, &c.....	13-9	14-0	15-8	14-8	14-8	15-0	15-0	15-0	15-0	15-0
Hack and Bran.....	98-8	98-7	98-7	98-7	98-7	98-6	98-5	98-7	98-6	98-7

PEAR TREES.—We passed an hour in the nursery grounds of Col. WILSON, of Dorchester, on Friday, and came to the conclusion that if any of our readers are in want of pear trees, they can find them there of all varieties, on pear and quince stocks, with prices varying according to the age and perfection of the tree. It is worth a journey there merely to look at his trees.

MR. LEVI BURT, nurseryman at Walpole, N. H., writes us that after 16 years experience in raising, budding and grafting fruit trees, he is satisfied that to get good healthy pear trees, that will last and be productive, it is necessary to graft on pear stock.

For the New England Farmer.

HOW CAN CHEMISTRY BENEFIT THE FARMER?

BY HENRY F. FRENCH.

The novelist Cooper, somewhere says that "men at thirty put on their interested spectacles, and seldom afterwards see anything very lovely, that is not, at the same time, very lucrative!"

Farmers are obliged, at the North, to keep on their interested spectacles, and look through them pretty sharply too, to discern clearly what is *show* and what is *substance*. They need all the aid that knowledge can give them, and cannot afford to be often deceived. We cannot expect to live long enough to plant and gather more than some forty or fifty annual crops, and a few years of error make a sad discount on the good results of our life, whether it be in field-culture or *heart* culture.

All knowledge eventually becomes *practical*. The unaccountable turning of the needle to the pole, the expansive power of heat upon water and air, and the instantaneous passage of electricity, are as much *practical, hard working facts*, as are our horses and oxen. Chemistry, if it has not discovered the *philosopher's stone*, which shall turn all it touches to gold, nor the *universal solvent*, nor the secret of *renewing youth*, and rendering it perpetual, has done *far better* for mankind, by analyzing the *stones on our farms*, teaching how to dissolve them, and convert their elements into food for the hungry.

The *chemist* now makes great promises, as did the *alchemist* of old. His laboratory is a mystery, and his technical language unintelligible, to most working men—as much so now as centuries ago. And sad thought it be, we must believe that learned men will still be found, base enough to deceive their fellow-men, under the pretence of benefiting them, for their own advantage. When Aaron cast down his rod before Pharaoh, and it became a serpent, the magicians and sorcerers by their enchantments did the same, and caused their rods also to become serpents, and from that time to this, the contest between truth and error has been so evenly matched, that the world has been, like poor Pharaoh, sorely puzzled always, to discern the difference.

The science of chemistry, though full of mystery and difficulty, has already established certain great, tangible, practical principles, of infinite value to the agriculturist. It has disclosed to us, among the rest, that plants, which were looked upon formerly as the results of incomprehensible accidents, are *made of something*, and that the same kind of plant is formed substantially always of the *same materials*. It takes the plant to pieces, and weighs and measures its constituent parts, and tells us *how much* of each it contains, and so we learn that the plant cannot be formed, unless somehow the elements of which it consists are furnished.

And next, chemistry looks at our soil, takes *that* to pieces, and tells us of what it is composed; and chemistry, too, makes a pretty good *guess* at least, of what the air supplies to the plant, and so informs us, whether the plant, which we desire to raise on our land, can find enough to eat and drink, and be clothed withal, with leaves and flowers and fruit, within its reach.

The principles being thus settled, and being so

simple that a child may comprehend them, next comes the *practical application* of them.

Farmers, like "the rest of mankind," have considerable human nature in them! They are pleased with new fancies, and *nearly* as likely, though I think not quite, to be humbugged, as their neighbors. The *Merino sheep fever*, when a handsome buck brought two thousand dollars, and the *Mul-ticulis fever*, attacked farmers, as well as others!

The market is full of scientific *manures*, as well as of scientific principles. Farmers are assured, in advertisements, that specific manures may be purchased, so valuable and cheap, that stable manure would not be worth hauling a mile, if to be had for nothing! and other advertisements assure them, that for a few dollars, analyses of their soils will be furnished with infallible directions, for the treatment of their land.

Now it is well known, that gross frauds have already been practised, in the sale of *adulterated guano*. No farmer can distinguish pure Peruvian guano, from a mixture readily formed, which shall be but *one-third* guano. *Superphosphate of lime* is, perhaps, the best scientific preparation for manure yet discovered, but nothing short of a chemical analysis can detect the vilest imposition in its manufacture. The soil can be analyzed accurately, but all chemists agree, that the process is one of great care, and costly, requiring much skill and practice and time, and that a charge of *twenty dollars* is reasonable for a single process, properly conducted. The farmer who procures an analysis, has of himself no means of knowing whether the result given him is accurate, whether it is a mere approximation to the truth, or a mere guess.

The only security, then, that the farmer has against imposition, the only security that true science has against quackery and false pretensions, is in the *personal character* of those engaged in the departments in question.

Employ a *chemist*, as you employ a *physician*, not only because he has skill, but because he has a high reputation for integrity and honor. Purchase costly fertilizers, as you would purchase valuable jewels, only of dealers, whose known character places them above suspicion of fraud. The different results of experiments with specific manures arise probably, as often from differences in the substances used, as in the soil itself.

The true value of the science of chemistry will never be appreciated, until more of system is connected with its application to the use of the farmer. I have thought that in Massachusetts, a State advanced far beyond its neighbors in agricultural improvements, that a system like the following might, ere long, be adopted. Let there be a chemist for each county, residing there, and acting under the direction of the County Society, or the Board of Agriculture. Let him be a practical chemist and a practical farmer. Let him make careful analyses of the various classes of soil which compose his county—of the *pine plain*—of the *clay*—of the *alluvial soil* by the rivers—of the *hard pan* soil of the hills. A decent knowledge of the geological formation of the country about him, a series of careful observations as to the *mechanical condition* of the soil, with the results of his researches in his laboratory, might, it would seem, give him such a general knowledge of the requirements of each class of soil, that,

with the proper information derived from the occupant, by personal inquiry, he might be soon as competent to give advice as to the culture of the land about him, as the doctor to prescribe for the sick, or the lawyer to advise his client. No physician would dare prescribe for a dangerous disease, upon the description of it given by an unskilful informant, and no agriculturist, however learned, can give much valuable advice about the culture of a field, from information derived through unlearned sources.

An analysis of a pound of earth, from a farm, would perhaps give a somewhat better idea to a chemist of its requirements for fertility, than would the examination of the paring of a finger-nail of a patient whom he never saw, give to the physician, of the physical ills of the sufferer. But as a general thing, it would seem, that the specimen sent, must be quite too small, and quite too uncertain, to be the means of much valuable information.

No man can take from a cultivated field a pound of earth, and feel any confidence that it fairly represents the condition of the whole, while our chemist of the county, who had analyzed perhaps twenty specimens of soil in the neighborhood, of similar character and position, would be able to judge, without a new experiment, with great accuracy, by a superficial examination merely, what must be its chemical constituents.

I repeat what I have often said, that I have the fullest faith in the advantages to be derived by the farmer, from the aid of chemistry, and it is, because I desire that all men should charge their disappointments, in attempting to avail themselves of her services, to the right account, and not always to the science itself, that I have ventured to make the foregoing suggestions.

H. F. F.

Exeter, N. H., April 6, 1853.

For the New England Farmer.

HEDGES.

MR. EDITOR:—I propose to write a few lines in answer to your correspondent from Hollis, on the subject of the hedges, that will stop cattle. Almost any kind of tree properly managed will make a fence, but the tree should be adapted to the land where it is to be grown. In looking about for some tree for a hedge, on poor pine plain land, I asked myself what tree would grow on this kind of land and be the least objectionable, and with the least care and expense, and have come to the conclusion that the White Birch and the White Pine are the best. These trees will grow and flourish without cultivation almost anywhere, and may be had for the taking up; or the seed of either may be easily obtained, and sowed where they are wanted to grow. The seed of the birch can be gathered in November, and the pine in August or September.

There are hundreds of miles of fence on the lines of railroads, where hedges might be raised much cheaper than rail or board fence can be built, and if the older roads had been hedged when they were first built, the hedge would before this time have been large enough to turn cattle, and the pine trees in many places kept the snow from drifting. I think the river birch, or the canoe birch, would be very suitable for river intervals on meadows, where rail fence is liable to be taken up by ice and carried off by freshets; the seed of both these trees

should be gathered in June or July, and both kinds are easy to cultivate. I set 14 rods of white birch hedge last week, at an expense of less than one dollar, the trees averaging 2 feet high, and got them in in good order; so you see it will not cost me much to try the experiment. The Silver or River Maple would grow on good land the quickest of any tree that I ever cultivated, and may be easily obtained by seed or seedling trees. The seed may be gathered in June or July, and sowed the same year.

B. F. CUTLER.

Pelham, N. H., April 4, 1853.

EMERY'S REAPING AND MOWING MACHINE COMBINED.

We lay before our readers this new labor-saving machine, in order that it may be seen and examined, before the busy season arrives, when it may be called into use.

As will readily be seen, it is provided with a driver's seat and wheels, independent of the machine itself, but attached by hinges in such a manner as to allow an easy action and adjustment, while this method does away entirely with all the side draft.

The machine itself is provided with a large main wheel, being about forty inches diameter and eight inches face, with the necessary projections on its surface. This wheel is cast with an internal gearing at one side of the spokes, the teeth of which are protected from dirt and strengthened by a deep flange of nearly three inches. The main frame is suspended from this wheel, by means of adjustable pinion boxes, the boxes being hung inside of hangers attached to the frame itself. By applying a kind of wrench to the box, (which projects far enough beyond the hangers, and is made square,) it may be turned; thus by the action of its teeth on the corresponding teeth on the hanger, the frame itself is raised or lowered to any desired point, where it is confined by a simple iron key.

A small pinion is placed inside of this large wheel at the forward part, and its shaft confined to the under side of the frame itself, this shaft extending far enough outside to receive an eccentric close up to the frame.

The motion of the cutters is obtained by eccentric straps and connecting rod, passing along the outside of the frame to the fore end, where it connects with an elbow or knee iron, as shown at A, in Fig. 1. This elbow extends its other end through to the front of the main frame, as seen at B, and is confined in position by a heavy substantial bed-plate of iron. The end of the cutter bar itself, connecting with the elbow at B, has its motion simply and directly from the main wheel, all

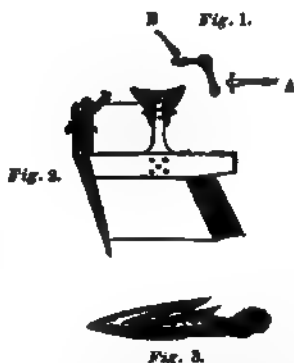
parts working constantly in line, giving a stroke of eight inches by the eccentric, and each end of the elbow being eight inches from its centre of motion, causes on either end a deflection of but five-eighths of an inch beyond a straight centre line. At the same time, the cutters have as much velocity as the best reapers and mowers in use. They make but half the reverses or vibrations, and require less than half the weight of cutter bar and connections of either of them, while it is equally strong.

This cut represents a transverse section of the wrought iron cutter beam, with a section of the cutter bar, cutters and divider. B represents the cutter bar to which the steel blades are attached, on its under side,—the bend of the blades being upon their upper side, and sickle-edged. These blades also extend back of the cutter bar, with cutting angle and edges same as before it, but not terminating in a point. This rear projection serves to cut and clear the "clog" or fibre which may possibly escape the forward cut and be drawn into the dividers. D represents a section of the crank axle which extends through the hollow beam and supports its outer end. C represents the double plate hollow beam with attachments. A represents the divider, with openings and guides through which the cutters pass; this divider is made very true, and with sharp corners over which the cutters pass, forming a perfect shears cutting action. These dividers are wider than most others, leaving a space of about two inches between them, thus better protecting the cutters from injury from stones, also compressing the grass or grain into a more dense body, and better condition for the action of the cutters.

The cut showing the mower represents wheels attached, same as with the reaper. However, where the fields are small, and it is desirable to have it smaller, and the crop of grass or grain is so light as not to produce an excessive side draft on the horses, the forward wheels and seat may be removed, and the horses hitched closely up to the machine, the driver moving back upon a seat directly forward or over the large main wheel.

These cutters and dividers are not dissimilar to those used by the first premium mowing machine at the late trial by the State Society, with the exception that the divider is made to fit round the under side of a wrought iron cutter beam, the beam itself being made of two plates of wrought iron rolled into a sort of trough, with their concave faces placed together, and then firmly riveted, thus forming a hollow beam. An enlarged but imperfect representation of the divider is shown in Fig. 3.

Through this hollow beam a shaft is passed, and at its extreme end this shaft is turned at right angles to the rear of the beam about two feet, and a wheel attached to its rear end, to support the



outer end of the beam. At the inner end of this shaft is attached a sort of crank or lever about two feet long, extending forward towards the driver's seat, with a leather strap or chain attached to it. This strap, passing upwards and over a shieve, extends along the large lever to the driver's seat, and passing another shieve, and is then attached to the foot board of the driver. This main lever, which is seen passing the driver's seat, is made permanent to the machine itself, and is kept in its desired position or elevation, by means of an upright post beside the seat, with a series of catches and latch, operated by the driver's foot, so that while the person is raising the lever with his hand, with his foot he loosens or confines it where he desires.

Therefore, while he raises the lever, lifting by it the side of the machine directly in rear of himself, the strap or chain is drawn over the shieves, and the end of the wrench lever is raised sufficiently to turn the crank shaft which extends through the cutter beam, and by this being turned, the wheel at the outer end becoming a fulcrum on the ground, the beam itself must be raised at its outer end so as to maintain a uniform elevation of its whole cutting front from the ground.

The apron itself is shown with its fixtures in Fig. 2, detached. It is made of a strong frame work and light covering of wood and tin. The T standard at its back is a breastwork to protect and support the raker, who stands erect, face forward, directly behind it. The delivery is at one side, and has a slight elevation above the cutters, about 1½ inches, and is over four feet wide. A reel may be used at pleasure, and is always sold with the machine. The reel is driven by a pulley on the main wheel shaft—the band passing below the apron to the front side, where it passes upward to and over a pulley on the reel shaft. The band

and pulley have been omitted by the engraver, although in his sketch made from the machine.

Price complete for this machine will be about one hundred dollars, with the warranty.

THE HIVE AND HONEY BEE.

In advance of publication, we have been permitted to look at the sheets of a forthcoming work on the above subject, by the Rev. L. L. LANGSTROTH, of Greenfield, Mass. We have read them with pleasure, and believing in their statements, as we do, from our own observation of the habits of the bee, we may add, with gratification and delight. The descriptions are clear and concise, and are strengthened by quotations from the ablest writers on the subject. We give below a single extract now, and shall refer to the subject again.

Many persons have not the slightest idea that *every thing* may be seen that takes place in a beehive. But hives have for many years been in use, containing only one large comb, enclosed on both sides by glass. These hives are darkened by shutters, and when opened, the queen is exposed to observation as well as all the other bees. Within the last two years, I have discovered that with proper precautions, colonies can be made to work in observing hives, without shutters, and exposed continually to the *full light of day*; so that observations may be made at all times, without in the least interrupting the ordinary operations of the bees. By the aid of such hives, some of the most intelligent citizens of Philadelphia have seen in my Apiary, the queen bee depositing her eggs in the cells, and constantly surrounded by an affectionate circle of her devoted children. They have also witnessed, with astonishment and delight, all the steps in the mysterious process of raising queens from eggs which with the ordinary development, would have produced only the common bees. For more than three months, there was not a day in which some of my colonies were not engaged in making new queens to supply the place of those taken from them, and I had the pleasure of exhibiting all the facts to bee-keepers who never before felt willing to credit them. As *all* my hives are so made that each comb can be taken out, and examined at pleasure, those who use them, can obtain from them all the information which they need, and are no longer forced to take any thing upon trust.

For the New England Farmer.

POSTS AND STAKES.

MR. EDITOR:—I have been a constant reader of the *New England Farmer* over one year, and do not recollect of seeing anything in it about setting posts and stakes in fence. I had heard it stated that the top end of the stick should be stuck in the ground. In 1838 I took a stick 14 feet long and cut it in the middle, setting the butt of one up, and the other down, 12 feet apart. In five years the one with the butt down rotted off, and the other stands sound yet.

J. DAVIS.

East Bernard, Vi.

REMARKS.—The above is a model communication, Mr. DAVIS utters his facts without preface or cir-

cumlocution. They are read in a moment, understood as quickly, and are worth a "mint of money." The evidence is strong enough to induce any man, if he will but look at it, to set his posts and stakes butt-end up.

A person writing in the *Hartford Times* several years since, said that in taking up a fence that had been set fourteen years, he noticed that some of the posts remained nearly sound, while others were rotted off at the bottom. On looking for the cause, he found that those posts that were set *limb part down*, or inverted from the way they grew, were sound. Those that were set as they grew, rotted off.

"A Farmer" writing in the *German town Telegraph* in 1849, says a gentleman in one of the New England States set a series of white oak posts, and for the purpose of testing the theory, set every other one top part down. After eight years the inverted posts were sound and good, while those that had been set with the butts down were, in almost every instance, decayed.

Another person in the same State set two chestnut posts for the purpose of hanging a gate. After a lapse of eighteen years he found the one butt end down very rotten, while the other, set with the top end in the soil, scarcely exhibited any appearance of rot.

The reason probably is, that the sap vessels are filled with sap, undergo a chemical change, and induce internal decay, while the moisture from the earth carries on the same operation on the external parts of the wood. Or, it may be, that the tubes through which the sap ascends have valves or separations, to prevent the weight of the sap from falling back, and that if the posts are set as they grew the moisture would rise as did the sap. While if inverted, not only would the sap flow down, leaving the post dry, but no moisture would rise.

But we are not certain about this. The subject is important, and worthy the attention of some of our scientific correspondents.

All persons making fence will do well to remember these facts.

THE COLD GRAPERY.—This is the title of a neat little book giving directions how to raise grapes in houses under glass and without artificial heat. It is prepared by WILLIAM CHORLTON, Gardener to J. C. Green, of Staten Island, N. Y. We have read it with interest, and think it will prove very useful to those attempting to cultivate the grape without fire. Many persons would be glad to erect the building and fit it up, if in this way they could succeed in cultivating the grape without the constant trouble and expense of erecting furnaces and keeping up an artificial heat. We hope that by the aid this book will afford, they will be able to succeed. Published by J. C. RIKER, 129 Fulton Street, N. Y.

GUNSON ON MILCH COWS.

We have heretofore noticed the work of M. Gunson in relation to testing milch cows by certain appearances of the hair commencing at the odder and running up the thighs. Having a good deal of confidence in this mode of ascertaining the milking properties of cows, both from our own experience and the opinions of other observing persons, we have thought the matter of sufficient importance to procure an engraving, and give such other brief illustrations as would make the subject clear to the reader.

While the subject is before us, we find the Editor of the *Germanston Telegraph* has been giving it attention, and we avail ourselves of his labors, mainly agreeing with him in the value and importance of the system. He says, "sometime ago, at a meeting of the Philadelphia Society for Promoting Agriculture, Mr. JOHN NEFFLIN, an elderly, respectable and intelligent farmer from Germany, was introduced, for the purpose of enlisting the attention of the society to Gunson's method of increasing the yield of the milch cow, by selecting the proper animals for the dairy, according to his method, or rather discovery. Mr. NEFFLIN desired that a committee should be appointed to test this system, as he was satisfied that all that was needed to impress the members of the society and the farming public with its truthfulness and importance, was a trial, or many trials, inasmuch as he had never known the tests to fail, after many years of observation and experiments.

The Society, always anxious to promote the interests of agriculture, even at heavy pecuniary expense, when the object seems to warrant it, at once appointed a committee to investigate the matter—though several members had previously been strongly impressed with the truth of the system—consisting of Dr. ELWYN, GEORGE BLIGHT, ISAAC NEWTON, JOHN WILKINSON, SAMUEL WILLIAMS, and SAMUEL C. FORD.

The committee, after the trials had taken place, say in their report:

"More than forty cows were examined by Mr. NEFFLIN, in the presence of members of the committee. All the remarks of Mr. N., all the questions and answers, were taken down at the moment by Mr. ARTHUR CANNON, phonographic reporter; and all his statements were compared with those of the owners of the cows; and after a full and particular investigation, carried on in the most searching manner, and sharpened by incredulity, the committee have no hesitation in giving their adhesion, and expressing their concurrence in the views of GUNSON. The precision and accuracy with which Mr. NEFFLIN described the qualities of the animals, and the unhesitating manner in which he revealed all their properties, could not but impress the committee with an entire reliance on his own skill, and a perfect confidence in the views of his teacher."

The stock of Mr. FORD having been examined and their qualities described, Mr. F. certifies that "it is a correct report of the qualities of his cows. Mr. WILKINSON also certifies as to his stock examined and described in the same manner, as follows:

"The description given of my cows by Mr. NEXFELIN, after he examined them by his improved GUENON system, is in the main very correct, and satisfies me that this is the only reliable system by which cows can be selected."

We will add that GUENON's system, which has been simplified and made more manifest by Mr. NEXFELIN, is principally comprised in the following:

The hair of the horned cattle, as is well known, grows downwards, only in the milk mirror which begins at the udder, the downlike, delicate, short and lighter-colored hair grows upwards; and where the ascending and descending hair meet, they form an elevated stripe, a vortex or whirl. This whirl is the real frame or border of the milk mirror, and gives it its shape. *This shape is the principal mark of the productiveness of the cow.* One shape shows a greater productiveness of milk than another."

To extend the usefulness of this really important discovery, Mr. NEXFELIN has prepared a treatise on the subject, which has just been published by Mr. C. B. ROGERS, 29 Market Street, Philadelphia, with a handsomely-engraved chart, containing seventy-eight illustrations of the system—the perusal and possession of which we would recommend to every farmer for his guide in selecting his dairy stock; and especially do we commend it to their attention, as the rules laid down are applicable to calves three months old.

EXPLANATION OF THE LETTERS.

a, a, The greatest breadth of the mirror in all the classes and orders.

b, b, breadth of the upper end of the mirror in the first class.

c, c, ovals (O) above the teats.

The cow of the first figure is represented to yield 20 quarts a day for nine months; that of the second figure 6½ quarts a day for four months; and that of the third, 2½ quarts, and no particular time mentioned.

The Editor of the *Country Gentleman* says,

"Guenon's chief rule consists in the breadth of the 'escutcheon,' or space immediately behind the milk bag and contiguous parts, contained within the boundary lines, formed by the meeting of hair growing in opposite directions. The hair on the escutcheon grows upwards and meets with the hair on the other parts. In the very best cows, or those which give the greatest quantity of milk and also continue in milk a long time, or the year round, the escutcheon is very broad and extends upward to the root of the tail. Such animals are very rare, and in ordinary instances and under good feeding and keeping, will yield about six gallons of milk per day.

In less perfect animals, the escutcheons will be narrower, and frequently will extend only part way to the tail, and so in different cows diminishing in breadth until it reaches the medium which is found to exist in the greatest number, by far, of all milch cows. In poor milkers, it is quite small; it varies also considerably in shape, but the same general rule applies to all shapes, namely, that

the area of this escutcheon is an accurate indication of the amount of milk any cow will give. Guenon figures and describes no less than seventy-two different forms and sizes of escutcheons, all exemplifying this general rule, with a few exceptions, which he states, but which we cannot here point out, and all indicating with much accuracy the quantity of milk given and its quality and duration."

From the New England Farmer.

MORE ABOUT PLOWING.

Farmers who look at the plowing of their neighbors, and at cattle show plowing fields, with a critic's eye, notice much difference in the state of the soil where different plows have been used, even though they all turn flat furrows, and all done in a workmanlike manner. A few years ago this was more noticeable than at present. We might on cattle show day go on to the field after all is finished and find some lands turned upside down so smoothly and nicely that it seems as though the only change made is, the soil is cut in slices and turned the other side up, lying about as compact as before. Other lands we would find with the furrow slice lying in a slightly rolling position, highest in the middle, and the soil therefore more loose and crooked than the other. Sometimes a land would be seen which, from some peculiarity about the plow, had the appearance of having been finely harrowed.

This matter of the condition of the soil in the furrow slice, whether loose and porous or solid, seems not to have attracted due notice from plow judges and writers. They have said much about the position and width of the furrow, but seem to have left its pulverization as a matter of course to the gentleman with the harrow. Now harrowing on stiff land, newly broken up, I find to be the most hard and wearisome of all spring work, both for team and teamster; therefore the plow which leaves the soil in a good condition to harrow quick and easy, is plainly far preferable to one which merely turns it and leaves it about as solid as it found it. The Michigan double plow does this to perfection, and is likely to be popular on that account.

But it is plain by what we have all seen, that the single plow may be greatly improved in this respect. Let our plow-makers care less about the trial with the dynamometer and more about putting the soil in good condition; that is the first and main point, ease of draft is secondary. I believe there is yet plenty of room for improvement in the making of plows, both for breaking up the sod and for working old land.

BACHELOR.

March 12, 1853.

SHEEP SHEARING FESTIVAL.—The third annual Sheep Shearing Festival, by A. L. BRIGHAM, Esq., of West Cornwall, Vt., will take place at the hotel of JAMES R. HYDE, in Sudbury, Rutland county, Vermont, on the first and second days of June next, at 10 o'clock, A. M. From 50 to 100 French Merino Ewes will be publicly sheared, so that all may see and judge of the sheep and fleeces for themselves. Every accommodation will be rendered to make the stay of the visitor agreeable.

HINTS FOR THE HUSBANDMAN.

SORREL.—The presence of this production—grass we are not permitted to call it—is always to be considered as an indication of a lack of calcareous matter, for where the quantity of lime in the soil is not deficient, sorrel will not grow. On all light, silicious lands, lime has consequently been found a most useful article, and its application invariably attended with highly favorable results.—And just in the ratio of its uses, whether in compost or in its natural state, so far as our information extends, has been the diminution of the sorrel crop.

GOOD TOOLS.—The old adage—"He must indeed be a good workman who can afford to work with poor tools," is one which, in our opinion, embodies a great deal of truth. If we farmers employ a mechanic—a mason for instance, or a house carpenter, to execute a "job of work," we of course expect he will come provided with the requisite tools. Should he make his appearance upon the premises with but half the implements required for the expeditious and successful consummation of the work intended, we should not hesitate to demur, and doubtless would dismiss him and entrust the job to another and more competent hand. But how is it on our farms? Are we always as jealous of our interests here? We think not. How often indeed is it the case that our "helps" are required to plow, mow, reap, and hoe, with implements which are not only "out of fashion," but too clumsy and ponderous for any except an Ajax to wield. Many of the old-fashioned implements are still to be found on our farms—such as plows, dung-forks, hoes and the like, and with these "hired men" and boys are frequently expected to perform as much work, daily, and to "finish it off" "as neatly" as though they were provided with the best implements the market can afford. This is poor economy. It is better to give away a poor or inefficient tool—no matter what may have been its original cost, and purchase a new one of modern construction that will easily enable the operator to perform more work, and in a more workmanlike manner, in one day, than he can possibly accomplish in two, with the old one, than to retain it in use, and lose ten times its value in the result. Away with the "old fogies," then, and obtain the light, convenient, and beautiful ones of modern days.

GOOD FARMING.—Rawstone, in his "Remarks on Lancashire Farming"—a very valuable and erudite work, says:—

"It may be laid down as a standing rule, and as a guide to direct us, that all good farming—the whole of that process by which bad land is to be converted into good and productive, and to be continued in that state,—is comprised in the three following operations of husbandry, viz.:—

1. To carry off all superfluous and stagnant water, by means of judicious draining.
2. To retrieve, through the medium of manure, the strength and fertility which has been exhausted by cropping.
3. To extract all noxious weeds, that the strength of the manure may be thrown into the crops, and not into the weeds." Every farmer who exercises his mind in the cultivation and management of his fields, will at once recognize the importance of attending to the foregoing observations. Yet, obvious as are the truths they inculcate, many, we fear, will fail to profit by them.—Farmers need "line upon line, and precept upon precept," in these matters.

For the New England Farmer.

SUGGESTIONS IN COMPOSTING.

BY F. HOLBROOK.

MR. BROWN:—Your correspondent, S. Tenney, of Lewiston Falls, in a communication dated March 7th, upon corn culture, gives the results of deep plowing and high manuring upon $\frac{1}{4}$ th of an acre. He states that by applying as much manure into four cords, on this piece as he applied the year previous on $\frac{1}{4}$ acre, (of which the $\frac{1}{4}$ th formed a portion,) and plowing deep, he obtained fifteen bushels more of corn than he did the year previous on the whole acre and a half.

I have to request of Mr. Tenney that he will lay the $\frac{1}{4}$ th of an acre, and the balance of the $\frac{1}{4}$ acre, down to grass with grain, and let the two pieces remain in mowing for say four years, carefully noting the comparative products of grain and hay on them. If he does not find himself paid many times over in the extra product of the former over the latter piece, for the extra labor and expense of the manuring and deep plowing, then my past observations in the field are erroneous. It would be an experiment easily tried, and desirable as affording an argument with which to convince the farmers in his neighborhood of the value of deep plowing and generous cultivation. As I have frequently observed, it seems to me that here in New England we need more generally to adopt a system of high manuring, deeper plowing, and a more thorough pulverization of the soil. Mr. Tenney's experiment thus far is in the right direction, and I hope he will carry it forward to a full demonstration.

I would like to suggest another mode of tillage to Mr. Tenney as worth his while to try. It is this: take a piece of grass land that needs plowing, and turn it over this spring. If the land has heretofore been plowed six inches deep, plow it eight inches this spring; or if seven inches formerly, plow nine inches this spring, laying the furrows accurately and smoothly over. If he has no sod-plow that will work rightly at these depths, let him procure Ruggles, Nourse, Mason & Co.'s Deep Tiller No. 75, and he will find he has purchased an instrument worth having. If the compost is not very strawy, spread it before harrowing the furrows, then harrow both ways, and then take a light plow guaged with a wheel to work shallow and turn the manure in three to four inches deep. If the compost is pretty coarse, then harrow first, spread the dressing and plow it in as

before, always avoiding the bringing of the sod to the surface. Plant corn and cultivate it cleanly. The next spring open and pull down the corn-hills with a heavy harrow, then plow down three or four inches deep, still leaving the sod undisturbed beneath, and sow grain with grass seed and convert the land to mowing. So far as I know, Mr. Tenney will find this the cheapest combined with the quickest mode of restoring tillage fields considerably worn, to productiveness and profit. What was before the surface and became filled with vegetable matter in the form of grass roots and stems, remaining beneath to decay, is a fine mellow bed of nutriment for the growing crops; while the former cold lower stratum is made active by the atmosphere and the manure; and the roots of the grasses having a deeper range than formerly by shallow plowing, the sward will not so soon become bound out by the entangling of its roots in a thickly-matted web, and the hay crops will be consequently more lasting and productive.

Your correspondent, "Young Farmer," in a communication dated March 19th, inquires for ways to re-invigorate an old pasture, too far off to receive manure from the stables and yards. You advise him very judiciously as to the time for plowing it, and indicate several fertilizing compounds which he may undoubtedly apply with advantageous results following. With your permission I will extend the list a little farther.

If "Young Farmer" has a bed of muck lying near his pasture, he had better try on a portion of the plowed land a compost of muck with ashes or lime. The compost should be finely worked, and mixed in the proportions of two bushels of unleached ashes or one bushel of dry-slacked lime to a half cord of muck, and lay in heap a few weeks before using it on the land. If the bed of muck lies handy, and the ashes do not come higher than fifteen cents, nor the lime higher than thirty cents per bushel, a good coat of compost can be furnished for from eight to ten dollars per acre.

Plow the land in August, seven inches deep, in narrow furrows laid over smoothly, apply the compost on the surface of the plowed land, and harrow fine. Sow rye, with a mixture of red and white clover, herds-grass and red-top seeds. Sow grass-seed liberally, so as to fill the surface with a good stand of the grasses. If present profits must necessarily be considered, harvest a grain crop the next year; but if a later return can be waited for, feed off the rye as pasture, taking no matured grain-crop, and the ultimate profits will be the greater.

Your correspondent, F. H. Currier, in a communication dated Jan 8th., inquires for ways to compost muck and fit it for use as manure. Among other modes, you refer him to one of mine, detailed in the 3d Vol. *Monthly Farmer*, page 381, and also recommend composting it with lime or ashes. I have frequently tried these modes, and can speak confidently in regard to each of them. A few years since, I plowed up a tract of grass land, and not having manure enough from the stables and yards to go over the whole piece, made a compost of muck and ashes to supply the deficiency. Thirty cords of muck dug a year previous were composted with one hundred bushels of unleached hard-wood ashes, and the mixture was applied to two acres. The ashes cost me fourteen cents per bushel, and the muck two shillings per

half cord, delivered on the field. The compost was intimately mixed up in the fall, in one large heap, which was once shovelled over the following spring. It was applied on the surface and harrowed in. The corn-crop on these two acres was entirely satisfactory in amount and quality.

I have frequently applied a compost of muck with dry-slacked lime,—though when I can buy ashes readily at not too high a price, I prefer a given outlay in ashes rather than in lime. The best fresh unslacked lime is the cheapest, because it is more effective in compost and swells very much in bulk when dry-slacked for use. Six years since, I had a heap of seventy-five half cords of muck mixed with lime, in the proportion of a half cord of muck with a bushel of lime. The muck was drawn to the field when wanted in August. A bushel of salt to a tierce of lime, 6 bushels, was dissolved in water enough to slack the lime down to fine dry powder, the lime being slacked no faster than wanted, and spread immediately while warm, over the layers of muck. The layers of muck were about six inches thick, then a coating of lime, and so on till the heap reached a height of five feet, a convenient width, and length enough to embrace the whole quantity of the muck. In about three weeks a powerful decomposition was apparent, and the heap was nicely overhauled, nothing more being done to it, till it was loaded the next spring for spreading. The compost was spread on the plowed surface of a dry sandy loam, at the rate of about fifteen cords per acre, and harrowed in. The land was planted with corn, and the crop was rising of sixty bushels per acre.

It has been the custom with me for several years past to make composts of this kind to supply any deficiency in quantity of other manure to dress and fertilize the amount of land I may want to plow. When these alkalines are used in compost, the mass should be applied to and kept near the surface of the soil, as their tendency is to sink down. They are very valuable when mixed with muck, because they neutralize its acids, promote its decomposition, and make it a free mass of vegetable or organic substances, fit for the nourishment of crops.

And now, my friend, if you think these hasty observations may be interesting or valuable to any of your readers, you may use them for that purpose. Anything herein that is not made plain and specific enough, will be detailed more fully, at the request of yourself or others. F. HOLBROOK.

Brattleboro', March 18, 1853.

For the New England Farmer.

CHOKED CATTLE.

MR. EDITOR:—I notice in the March number of the *Farmer*, page 145, an article upon the subject of cattle choking in feeding. It is a subject with which I have had some experience, but since the discovery of the following method of operation have had no difficulty in relieving in all cases where it has been applied. When an animal is discovered to be choked, it should as soon as possible be placed where it can be handled, and an instrument of the following description forced down the throat until it is relieved.

Take a tough piece of timber the size of a good whip stock, from three to four and a half feet long, a ball of yarn, or some soft substance put on the

small end,—a piece of soft leather drawn over it and confined to the stick with a cord or twine tied around above the ball, and secured from pulling off by means of notches cut in the stick; the ball should be from one to two inches in diameter, in proportion to the size of the animal, and greased when used. Such an instrument may be used without any danger of injury to the animal operated upon. I have used it with perfect success with choked swine, in several cases.

But in general, a preventive is better than a cure; therefore, perhaps I cannot render a greater benefit to the feeders of neat cattle, than to inform them, if not already acquainted, with a simple, but I think infallible remedy against cattle choking when feeding; they may get choked when running at large, but when animals are to be fed with any article with which they are liable to get choked, place them in the stall, or tie-up, and simply put a bar or stick over their necks sufficient to keep them from raising the head above the level of their bodies, they never get choked, try it.

A SUBSCRIBER UP NORTH.

COST OF FENCES.

We are not aware that any very reliable estimates have as yet been made, by practical men, relative to the cost of the several species of enclosures ordinarily made use of on farms. In looking over an old number of the *Farmer* recently, we found a paper on this subject furnished by Mr. SAUTLEFF, which is worth repeating. The estimates are given by Mr. S. as the deductions of his own experiment:—

"White cedar fence made of posts and rails, five rails in height, three lengths to two rods nearly, cost 91 cents a rod.

White pine rails sawed two inches by eight, and chestnut posts, four rails high, three lengths to two rods nearly, cost 64 cents a rod. In both these instances the cost was exclusive of the setting.

Good four and a half feet stone wall varies from \$1 to \$2.50 the rod, according to the ease with which the stone could be procured, and the manner in which it was laid, whether by trenching or otherwise.

Hedge fence made of Virginia thorn plants, (*Crataegus cordata*,) set twenty-one to a rod, cost at the end of the fourth year, including planting, trimming, &c., 50 cents a rod."

It will not be questioned, we presume, that in the above estimate, the cost of stone walls is greatly too high. The expense of transporting stones from fields and pastures when they oppose a serious obstacle to the operations of the cultivator, and when they occupy much land which their removal renders available for important purposes, ought not, we think, to be taken into the account. The cost of "laying" wall, when the stones are of proper size, is generally from twenty to thirty cents, but the artistic skill demanded in the operation is so slight that any farmer can construct

his own walls, if he can but persuade himself to think so. By rolling the largest stones into lines and securing them by smaller ones to prevent their canting out of place, and building upon them with smaller stones, till the fence is of the required or proper height, a substantial wall will be procured at a very trifling expense, as the work may be performed at seasons of comparative leisure, and when, generally, there is little of any thing else to do. "Double walls," and "faced walls," though they have a more neat and finished appearance, are never desirable, except when there is a large amount of stones to be worked up, or where the wall is near buildings, and intended partly for ornament, as well as utility. In "facing," stones are often laid with reference to neatness, rather than stability. To secure a "good face," some of the most important principles of masonry are frequently neglected, and beauty secured at the expense of durability. Single walls, if the stones are of proper size, are to be preferred.

For the New England Farmer.

BENEFITS OF AGRICULTURAL PAPERS.

Masses. Editors:—Knowing by experience that much good results from the matter contained in papers, I think it necessary that we all strive to improve them. How can this be done? It can be done in various ways. Let every reader that has received a dollar's worth of information, through the papers, acknowledge it, and at the same time communicate something from his own experience, to benefit his neighbors. One man can raise a bushel of corn for less expense than another; let him show his method, with all the items of expense. One thinks poultry and eggs can be produced with a handsome profit, another believes different; let facts decide. The manufacturer of plows will tell you that his is the best, and his story seems true, until his neighbor, the plowman, decides to the contrary. A word about plows; is it a fact that plows are better than they were in bygone days? More than thirty years ago I held a plow that did actually cut and turn over furrow after furrow, keeping its place at the end without a hand being applied to it. Then there was Keith's plows so generally used twenty years ago, that I verily believe do better service than many of those now in use. The woodhopper works to disadvantage, when he wields a heavy irregularly formed axe. Perhaps a hint to agricultural societies to offer a handsome premium for the best axe might result in lasting good. The cultivator of corn would be wise to avail himself of a remedy against the ravages of the *cut-worm*, which remedy has been applied by the writer of this, for nearly forty years, without a single failure. It is a coating of tar applied to the seed corn.

To make our agricultural papers useful and interesting, it requires talent as well as the offerings of the small farmers; to bring about this result, let the officers and members of agricultural societies write over their proper names, the principles of farming, and facts connected therewith; let the farmers of unlimited means show by figures, the

expense and income of their crops, each different crop by itself, then sum them all up, so as to know whether their business will pay; and let the farmer of limited means tell his story, and meet his wealthy opponent for a fair discussion of the whole matter of agriculture. Too many of our able writers keep themselves behind some assumed name, so that we know not who we have to contend with; then again what they write is so void of particulars, that we can hardly take ground to reply to them. Would it not be well for you to give out weekly, some particular point in farming, to be discussed by your readers, their communications to be inserted in two weeks from the date of the question, all writers to be limited to a certain space. This would have the advantage of a *Lycæum*, by the writer being obliged to advance his own opinions without being swayed by those of others.

I like short articles from practical men. I like, when reading a statement of any branch of farming, made to show that it is profitable, to be directed to the exact amount in dollars and cents.

West Needham.

R. MANSFIELD.

INDIAN CORN.

There will never be a time, probably, when Indian corn will not be contemplated in the light of an important staple, by the American agriculturist. For a great variety of uses, it is certainly unsurpassed in the catalogue of grains, and in point of productiveness it compares favorably with most grains. Yet there are a great many who consider its cultivation as a matter involving much uncertainty and risk. They complain of the early frosts, which cut off the young plants; of the drought, which coerces or averts the development of the grain, and of the later frosts, by which it is sometimes, though rarely, destroyed. All crops are liable to accidents, and corn can by no means claim an exemption. Yet that it is more liable to suffer and be destroyed by untoward events than other crops of similar value, is what no one, perhaps, who candidly contemplates the subject, will pretend to assert. If the early frost withers the tender blades, it never destroys the roots; a few warm days reclothes the field in its pristine verdure, and the real injury is, at most, but nominal. The drought, or its effects, none can prevent, though the latter may be very essentially mitigated by adopting a judicious course of cultivation. Formerly the old Indian method of elevating a high conical hill around the roots was in vogue; but this has been found to be an error. The more of these hills there are on an acre, the greater, of course will be the extent of surface exposed to the sun and winds, and the greater the exposure, the greater too must necessarily be the evaporation in a dry time. It was also deemed essential, in order to obviate the effect of drought, to allow the weeds to grow and cover the soil to keep out the sun, and thus preserve the soil perfectly moist and cool. Now experience has demonstrated, and the

most indifferent observation will convince any one that the more vegetation there is on an acre the greater will be the drought upon its moisture. If, in a severe drought, you pull up a handful of weeds from a mass, the foliage of which completely shuts out the sun from the soils, you will find the roots bring up no moist dirt; while the soil on which no weeds have grown, though in the immediate vicinity of the former, and exposed to the unmitigated heat of the sun, will be damp. In working corn lands, we should endeavor to keep the surface clean and light. Fine, well pulverized earth is a non-conductor, and consequently the oftener we pass through our fields with the harrow or cultivator, in dry weather, the better will it be for the crop. A brick, fresh from the mould, if placed in the yard and covered with a *stratum* of perfectly dry sand, will retain its moisture five times as long as one struck from the same clay and at the same time, if exposed openly by its side. No hills should be made around Indian corn. Plant so as to pass both ways through the field, i. e., longitudinally and transversely, and do the working with the cultivator and horse. The few weeds that remain after the latter has passed, are easily eradicated with the hoe or hand, and all the rain that falls will be carried to the roots, instead of being thrown from them into the centre of the space between the rows. If you plant a kernel of Indian corn in rich soil, and suffer it to grow without hilling, it will take as strong a hold, and maintain itself as firmly against winds, as one that is hilled, and more so. But if, after it has run up to the height of three or four feet, you bring up three inches of dirt around the foot stalk, the lateral roots, which are its stays and braces, will stop growing, and a new emission of laterals will be induced from the section covered by the fresh soil. The old stalk will also be blanched by the privation of air, become crisp and brittle, like asparagus grown under leaves, and easily break. The same will take place as often as fresh dirt is drawn up; and the energies of the system exhausted by sending forth roots from which it in return can derive but comparatively slight support.

For the New England Farmer.

OYSTER SHELL LIME.

MR. EDITOR:—Dear Sir,—Will you inform me through your valuable paper, of the comparative value of oyster shell lime and stone lime, as a corrective of the acid in peat mud, in conjunction with salt, according to the receipt of Prof. Mapes. Many of my neighbors, as well as myself, wish to use the oyster shell lime, manufactured at Medford, if it is really valuable. By giving us information, you will confer a favor on
MANT.

REMARKS.—See advertisement for explanation in another part of the paper.

For the New England Farmer.

FIELD SEEDS.

Mr. Brown:—I venture to send you a few thoughts on the subject of *field seeds*. And as the time approaches when farmers have occasion to use them, I trust that these thoughts, if deemed worthy of a place on your pages at all, will not be accounted unseasonable.

Many farmers are awaking to the importance of seeking the best kinds of stock, and the best quality of field seeds. But I do not recollect to have seen a caution offered on your pages, with sufficient explicitness, against allowing foul seeds of any sort to be mingled with the seed we use.

No man needs to be informed that soil pre-occupied with weeds, cannot very largely yield useful produce. Every intelligent farmer knows, though too many are very remiss in improving their knowledge, that if he would secure a good yield of either grass or grain, the strength of the soil must be reserved for it.

The farmer who sows foul seed in his fields, commits an error which in the end must cost him dear. He may use an indifferent bull or horse, or buck, and suffer only temporary injury, because he can rid himself of his worthless stock, and thus end his loss. Not so when he sows foul seed. His loss but begins with his error. He introduces an enemy into his enclosures, to which he must either surrender at discretion, or maintain at endless labor and expense, a warfare always exhausting, and commonly futile, because not waged with sufficient energy and thoroughness. He entails, too, upon posterity, a curse of inestimable magnitude.

Do not dealers in agricultural seeds often contribute to the evil in question; sometimes inadvertently, but as often, perhaps, for the sake of the profit they secure? Of the occurrence of the following fact I am assured.

Some two years since, a gentleman of this community wishing to obtain some "imported spring wheat," and some spring rye, wrote to a friend in your city to ascertain whether he could procure it for him perfectly clear. The friend replied that he had the assurance of a dealer whom he had consulted, that he would furnish both the kinds of seed sought, in the condition specified. A few bushels were accordingly ordered, and with the bill transmitted, there was a printed assurance that the house dealt in no seeds but those of the best quality and in perfect condition. Great was the purchaser's surprise, therefore, when on opening the casks, his attention was attracted not by the beauty of the grain, but by the variety of foul matter it contained. Happily for him his neighbors had engaged most of the *wheat* before its arrival, so that he had but a single bushel remaining. This he attempted to clean with screens, but failed because a part of the foul seed was larger than the grain. He was compelled, therefore, either to forego the sowing of the seed, or with it to sow that which would be ruinous to his land, or to clean it by picking it carefully over by hand. The latter course he adopted, looking over a spoonful at a time, and it is hardly credible, though strictly true, that besides a liberal sprinkling of rye and barley, he found no less than *fourteen* different kinds of foul seed, amounting in the whole to about three quarts. This, too, was im-

ported foul seed, as though our farmers have not already indigenous weeds enough to contend with.

The case of the rye was not much better. It could not be cleaned by screening, and it was not worth picking over. So the purchaser carried it to the mill and had it ground for his swine. To a word of remonstrance sent by the purchaser to the dealer, the latter replied that he sold "as clean seed as others sold, of the same importation." To the rye he made no allusion.

Now, Mr. Editor, I hold that important as the introduction of certain grains may be to our country, their usefulness can never equal the mischief done by the simultaneous introduction of a dozen kinds of foul seed, to become, by unavoidable dissemination, a pest through the land. Who will pretend to estimate the mischief of a single importation of grain in the condition of that above specified? Who can tell the amount of the evil? Would not any quantity of seed, in such condition, be a dear *gift* to the country, since some of it would of course be sowed by careless farmers, and since the spread of noxious weeds when once rooted, though it may be gradual, is inevitable.

A word of exhortation, and I have done. If we would raise good crops, let us seek seed of the best quality. If we would have clean fields, let us use only clean seed. If we would enjoy the pleasures as well as the profits of farming, let us labor to keep our farms in good condition, while we labor with equal diligence to keep a "conscience void of offence toward God, and toward man."

L. MATTHEWS.

Cornwall, Vt., March 20, 1853.

REMARKS.—We improve the earliest moment to give place to these timely and valuable suggestions. Endless troubles, labors and losses, grow out of the practice of sowing mixed seeds. It is hoped these hints will lead to a careful examination of seeds before they are committed to the soil, as well as a stricter regard to their purity by those who import and sell them.

ADDRESS BY WM. S. KING, ESQ.

We have read with interest, the Address by Mr. King, editor of the *Journal of Agriculture*, before the New Hampshire Agricultural Society, at Meredith Bridge, on the 7th October last, at its third annual exhibition. We give below an extract, all we have room for at present. The address is written with spirit, and exposes the inconsistencies of those who mock at "book farming," or in other words, intelligent labor.

It was our fortune to have there, (at the World's Fair) among others, one man, who deserves honorable mention at this farmer's festival,—the commissioner from the State of New York, B. P. JOHNSON; then, as now, Secretary of the New York STATE AGRICULTURAL SOCIETY. For many dreary weeks, he stood almost alone; sad and desolate, amid the neglected contributions of his country. Who chanced to visit us, came to sneer. "These Yankee plows," said an unusually unprejudiced visitor, one day, "may do well enough among the rocks and stumps of America; but they are not comparable, for general work, to our English

plows, or even to the Belgian." "Do you know," retorted Johnson, "that in our country, we have fields, without a fence, or a rock, or a stump, larger than your whole island of Great Britain; and these plows have been found to work well there, as they will work well anywhere. This flour is made from the wheat, you see yonder; and the wheat was grown on land plowed with implements like these; that crop of wheat averaged 62½ bushels to the acre, weighing 63 pounds to the bushel." So with the reapers. The *London Times* paraded an account of the American department, and christened McCormick's machine, "a cross betwixt a flying-machine, a tread-mill, and an Astley's chariot." "That flying machine must be tested on the field," insisted the sturdy Johnson, "and let them laugh that win." The tread-mill was tried. The grain, green and storm-soaked as it was, went down before it, as if it were the shears of Fate; and loud, though late, were the honest congratulations of our discomfited critics. The introduction of the American Reaper, alone, was by common consent, allowed to compensate England for all the gross expenses of the exhibition. In like manner, the plows were found to work well on English land. And, finally, the bitter opponent of all that is American and republican,—that same *London Times*—confessed that the United States, by their contributions for ensuring the good of the many, instead of pandering to the luxuries of the few, had carried off the palm, in this World's Tournament.

Why was it that at the eleventh hour, only, was justice done to one of the competing countries? Why did thousands, whose voices were afterwards loudest in praise,—to their honor be this said,—for so long time speak, but to scoff? PREJUDICE had pre-occupied their minds, and jaundiced their vision.

For the New England Farmer.

NEW BRUNSWICK.

MR. BROWN:—I have been a reader of the *New England Farmer* this last twelvemonth, and like it very much. But I have sometimes felt a little nettled at never seeing the name of New Brunswick mentioned in it, either as regards farming or any thing else. You must be aware that there is such a place as New Brunswick, and that your paper extends its circulation hither; but I suppose you think that "New Brunswick is no good for farming." It is better, however, than you are perhaps aware of; and to convince you of that, I have resolved on writing you some particulars regarding its capabilities. What kind of land we have—how we get along—and what we can raise. I do not feel myself altogether qualified for the undertaking, having only been two years in the country, and not being much used to writing, but it seems there is no one with better qualifications that thinks it worth their trouble.

This place is situated thirty miles from Frederickton the seat of the Provincial government, and thirty-five from the American frontier—Calais, Me. The settlers are a mixture of Scotch and English, the first of which commenced in the forest fifteen years ago. They have stuck to their farms and done well. The soil is a clayey loam, (not very stony) and rests upon a hard pan. The geological formation is grey sandstone and granite. The

growth of wood may be said to be a mixture of spruce and hemlock, birch, beech and maple.

Chopping down, clearing up, and fencing new land, costs £3 10s, or \$14 an acre. When it is sown with oats 3 bushels is allowed to the acre, and the return is 50, more or less; 70 is sometimes obtained. The ground is only harrowed twice over, and raked round the stumps. It ought to get more stirring.

We raise famous potatoes here. We had 300 bushels from the acre last season, good and sound. There was 800 bushels raised on one acre, near Frederickton, last year. The ground was a sandy loam, plowed out of the sward, and had no manure except 50 bushels of leached ashes. I saw some bushels of them at the Provincial Exhibition. We are not very particular in planting our potatoes on new land; we make no hole for the seed—just lay down the cuts (3 to a hill) on the surface, and draw the ashes and dirt round them. A neighbor of mine says, "he thinks they are *gis weel* rigged if he gets a chip on them." We raise grass seed in large quantities, and of superior quality; perhaps you may have heard of the Harvey Timothy, a great part of it is sent to Boston. We sow only 3 pints to 4 quarts on an acre—sometimes a little clover is added. The clover grows very strong; a neighbor of mine tells me that he used to sow some clover, but it grew so strong that he could not cut it, and he quit sowing it.

We top the hard-grass with the sickle, hence the seed is very pure. A good hand is allowed to top an acre a day. Four bushels from the acre is a fair crop. As for plow land farming, I have several times seen oats, barley and wheat raised here, which weighed respectively, 50, 60, and 70 lbs. per bushel. The land would do well, if it was well attended to; but there is great room for improvement. Indeed, I have often been surprised to see the crops which are obtained by the mode of cultivation sometimes practised. I know the farmers in my country would think hard to expect a crop from the same system. I have often thought that the farmers in this country calculate too much, sir. The farmers in Scotland do not calculate so much, and yet they are better farmers; moreover they have been allowed to be the best farmers in the world, and yet it has been said of them, that "they are strong as the ox, and as ignorant as strong."

I shall just state that oats here this winter have sold at 2s. 6d. per bushel, potatoes 2s., Timothy seed 14s., and hay £4 per ton, all on the spot.

A Scotchman in the backwoods of New Brunswick.

JOHN TAYLOR.

*Harvey Settlement, N. B.,
Via Calais, Me., March 2nd, 1853.*

REMARKS.—The New Brunswickers shall have a fair chance with us. They send us the finest grass seed the world can produce, and we suppose the men and women would come under the same comparative degree. A "Scotch backwoodsman" seems to be as glib with the pen as the axe, and if he can impart something to benefit "mankind in general, and farmers in particular," why he can "put it through" our columns.

FRAMINGHAM FARMERS' CLUB.—We had the pleasure of attending a meeting of this Club, at Fram-

mingham, on the 21st March. A large audience of ladies and gentlemen was present, and by their attention manifested a deep interest in all the exercises of the evening. They had, as usual, an address, followed by a discussion, which last was on the importance of a good library, and a better knowledge of Agricultural books. There is wealth, and talent, there, sufficient to establish the first, and to appreciate the attractive literature of the latter. With an organization a little more precise, with standing committees on the leading subjects, and essays and reports, one of the most useful associations in the State may spring from this germ.

For the New England Farmer.

CULTIVATION OF FRUIT.

The cherry, plum, peach, quince, pear, and apple, are the staple fruits of New England, and every farmer whose climate and soil is adapted to their culture, should raise an abundant supply for his own family, and as many as possible for the best market he can command. There are many sections, however, in Maine, New Hampshire and Vermont, where the stone fruits, as also the quince, cannot be raised. For instance, the farmers of Vermont should not expect much profit from the peach, plum, cherry, or quince, as they cannot be raised with advantage unless in the southern countries, and the towns bordering on the Connecticut.

But in the southern, middle, and eastern portions of Massachusetts, and the vicinity of all our cities and large villages, they may be, and are raised for greatly remunerating prices. A single plum tree in the vicinity of Boston, has produced \$30 or \$40 in a year, and many farmers have carried to the market from 3 to 500, and some as high as 8 or 1000 bushels of peaches, and sold from \$1 to \$2 per bushel, obtaining more clear profit from one-half acre of land, than is realized from a majority of the farms in the State. The cherry should be raised for family use, and every good husband (whether he has a wife or not) who has ground on which to grow them, may have the luxury in the different varieties of good sweet cherries, from four to six weeks.

The quince, may be grown to great profit, although its culture cannot become so generally profitable, as the peach or apple. The culture of the apple is one of importance to fruit growers, in all climates where it can be made to flourish, and there is hardly a farm in New England that has not some locality well adapted for an apple orchard.

My object will be to make some suggestions derived from my own observation and experience, to induce others to engage in this lucrative and pleasant branch of farming. But, says some good old farmer, "I shall never live to raise fruit, if I set out trees; my son James or William may if they want to." But my friend, suppose you do not live to enjoy the fruit from those trees, *somebody else* will regale themselves by eating it. And beside, have you not eaten fruit a hundred times from trees that you did not set out? And does not justice to the world require that you do as much for others that come after you, as has been done for you by others before you? Away then with that

false and selfish policy, so detrimental to all improvement in the moral and physical world. How noble to see a man in the decline of life planting the little acorn that shall grow to a tree, under which, generations yet to be born, shall be screened from the mid summer's sun. Who does not wish to do some beneficent act, to leave the world a little better for having lived in it, and perpetuate a pleasant remembrance to those that come after us. A gentleman some years since, was riding through old Framingham, in Middlesex county, and passing a fine orchard, saw a man standing under an apple tree very greedily devouring a fine apple. The stranger halted, and asked the man to give him an apple. He did so, and finding the fruit excellent, he inquired of the man under the tree. "Who set out this fine old orchard sir?" "An old Mr. John Ames, God bless his old soul," said the man with a mouthful of the rich apple. Who does not wish to have a hearty "God bless his soul" rest on his memory for having done something unselfish for the good of others. But look here friend, don't you see that every good fruit tree set on your farm makes it the more valuable, if you ever want to sell it, or for your sons and daughters to live on it? But any man under seventy years, in good health, and in favor of the *Maine Law*, may hope to live to eat of the fruit from the trees set by his own hands. Rev. Mr. Davis, of Fitchburg, tells of an old acquaintance of his, in Michigan, who set out an orchard after he was eighty years old, and lived to eat the fruit thereof, a number of years.

JOSHUA S. EVERETT.

Boerettville, Princeton.

LEGISLATIVE AGRICULTURAL MEETINGS.

TENTH MEETING—TUESDAY EVENING, MARCH 22, 1853.

The tenth meeting of the series was held at the State House on Tuesday evening.

The subject of discussion was "*The Subdivision and Fencing of the Lands of a Farm.*"

Mr. Brooks, of Princeton, presided, and on opening the discussion remarked that he had but little experience in the matter. As to the material for fences, in the district where he resides stone fences are almost universally used, and are considered the cheapest—their first cost being very little more than wood fence of any kind. They will stand thirty to forty years without re-setting, and can be renewed at a cost of 50 cents per rod. He had stone fences on his farm fifty years old, which he had renewed for 25 to 30 cents. He preferred to renew his walls upon the old foundation layer of stones, because they get firmly fixed in the earth and are less liable to the action of the frost. In regard to the subdivision of lands, he considered small lots preferable. In his neighborhood the practice is to enclose in lots of one to three or four acres. Frequent fences serve to keep the snow upon the ground, and retain the fructifying substances which fall with the snow and rain. They also prevent the light debris from being blown from land, and thus serve to retain fertilizing matter. Around the wall of an acre lot

the soil for the distance of a rod will be fertilized by the nutritive substances which are blown from the centre of the lot. In large lots this proportion would be smaller.

Mr. FRENCH, of Braintree, said he considered the subject one of much importance. He agreed with the chairman in a measure. On land where there are a great many boulders which cannot be disposed of in any other way, it is good policy perhaps to work them into fencing. But if land is free for the plow, and intended for cultivation, he much preferred to see it all in one lot, with a single exterior fence, and the buildings as nearly in the centre of the farm as possible. By this method the operation of plowing is made much more convenient—there is more room to turn round; but this is on the supposition that cattle are not to be turned in to get the "after feed." In building stone wall, if in a pasture, it might be well to use the old foundations, but if on arable land, not on a boundary line, he would dig a new trench and remove such of the old stones as are used into that. By his method the old trench is left for a drain, which is quite useful, as gravelly, stony land is usually very moist—and the bushes and briars which always cluster around a fence can be extirpated. The work, too, can be prosecuted more rapidly. He was disposed to favor stone fences because they are durable, and easily kept in repair.

In setting post fences he urged strongly the benefits of charring the butt-ends of the posts before setting them. He had on his place a post fence which had been standing for 18 years, the posts having been charred. Last year, he had to re-set some of them on account of their being thrown over by the frost, and found them perfectly sound. Charring is a great preservative against decay. Posts should be set $4\frac{1}{2}$ or 5 feet into the ground. For something more permanent, he thought wire fence would be very cheap, and might be made very strong. He would suggest to farmers, whether, on gravelly soil, it would not be the cheapest that could be put up.

In regard to hedges, Mr. French said that in France and England they were fast losing favor, and were being removed, as it is found that they impoverish the soil, drawing a great deal of fertilizing matter from it through their roots. If a person desires a screen around his buildings, there is nothing better of this sort than buck-thorn or arbor vitae—but neither can be said to be safe against cattle, though they may be combined with a wire fence and rendered safe. Mr. French thought farmers might add a great deal to the beauty of their farms, without extra expense, by a little care in setting their fences with regularity and a regard to the rules of taste.

Mr. PROCTOR, of Danvers, said that the matter

of subdividing lands in New England was at present very much determined by accident, which should not be the case. He conceived the design of fences to be the enclosure of feeding land, and the protection of cultivated land from cattle. If a farmer has no feeding land, fences will be an incumbrance in the farming operations, as plowing, for instance. He also considered it a great advantage to have the buildings in the centre of a farm, without regard to highways, because it saves time in teaming manure, going to the various parts of the farm, &c. Mr. Proctor thought a great deal of money was lost on stone fences, although he was aware of their great popularity. They may be of some service in retaining the manures on land, and fruit trees perhaps do better alongside of them; but numerous fences are so inconvenient in doing farm work, there are so many bars to take down and put up, &c., that he believed the disadvantages offset those benefits, and it was better to have a farm all in one lot.

Mr. Proctor took occasion to dissent from the extravagant views (as he deemed them) which have been advanced at these meetings in regard to the value of guano as a manure. He was not satisfied as to its efficacy in all cases. He knew of an instance where, in a dry season, it proved a failure in producing a corn crop, while ordinary manure was completely successful. It may do well at the South, as has been related, but it does not follow that it will do well here. He was inclined to call it *fancy* farming.

Prof. NASH, of Amherst College, was of the opinion that if lands were stony it would be well to cut them up into small lots; but on lands easily cultivated and level, the policy of the farmer should be to have as few fences as possible. They should be strong, and able to resist the attempts of cattle. Numerous fences are expensive, and farmers cannot support them. In fencing, reference should be had to duration and expense, along with the beautiful. It can, perhaps, as easily be made handsomely, as awkwardly,—we should endeavor to combine the beautiful with the useful.

Mr. SMITH, of Hadley, said that in his part of the State (the Connecticut valley) the lands were scarcely subdivided at all, even among different owners, owing to their being held in small lots, and the high cost of fencing materials; they cannot afford to fence their lands, and a great part of them are held in common. This is on intervals lands. He considered division fences inconvenient, besides lessening the amount of productive land. Cannot get a crop within a rod of the fence. Pasture lands alone are considered necessary to be enclosed by the farmers in his vicinity.

Mr. FLINT, Secretary of the Board of Agriculture, considered the question one of mere economy, but what was best, he was not prepared to say. He had seen a good deal of wire fencing,

and detailed a plan for tightening the wires. It was to have a small roller, with three holes bored in it, one in the middle and one in each end, which, after the wires are drawn through the holes in the posts, should be placed against the second post, and the wire passed through the hole in the centre; then by means of pins placed in the holes at the ends, the roller can be turned, and the desired amount of tension obtained. There is one objection to wire fences. He had known two or three valuable horses to be killed by them.—Horses, when let out in the spring, are extremely prone to gambol; and in racing from one end of a field to the other, are apt to run with great force, against a wire fence, from not observing it, and are instantly killed. He did not know of any preventive, except to lead them round and let them know that there is something for them to look out for.

Mr. HOWARD, of the *Boston Cultivator*, submitted some remarks in relation to wire fences. He knew of no better mode of constructing them than that described by Mr. Flint. They can be built with very long fastenings, trees forming the best posts; he knew of a line of wire fence where the fastenings were half a mile apart. It is important to have good wire. No. 8 is as small as should be used. Annealed wire is not proper, because the process of annealing renders it more liable to corrode, and it has been proved by experiment that it will support less weight than any other kind. He had known wire fence which had been up four years, and last season was perfectly sound.

Mr. CLARK, of Waltham, thought the subject resolved itself into the character of the lands of the farm to be fenced. If part is fit only for pasturage, it should be enclosed; if arable, it should be thrown into one lot. Where stones abound, it is good policy, perhaps, to make them into walks.

The chairman, Mr. Brooks, inquired whether 100 acres of pasture land, divided into 10 acre lots, would not furnish more feed than if thrown together.

Prof. NASH replied, that he thought it would. Better feed can be secured, and it can also be reserved if desired.

Mr. FRENCH thought the system might operate very well for a couple of months in the first part of the season, but after that time, he thought it would be full as advantageous to throw the pastures together.

GUANO.

Mr. Brooks, of Princeton, made an excellent speech at the State House, on the subject of manures, while that question was under discussion. He thought guano a valuable fertilizer, and may be used, under certain circumstances, with advantage. But the farmer, he said, *must place his chief*

dependence upon the natural resources of the farm for its fertilizing agents. He had a farm of fifty acres left him, upon which, for a life-time, had been kept six cows, a pair of oxen and a horse. This, under the old practice, was the extent of its capacity. He had added one hundred acres of land, and was feeding from the whole forty-one head of cattle. That is, he has added two proportions of land and more than six proportions of stock! and had paid for the whole, from the profits of the land. He believed that 25 per cent. of all crops may be sold from the farm annually, and the farm still grow better; and that from such sales a nett gain of from 10 to 15 per cent. may be realized, yearly. Mr. Brook's practice sustains his opinion.

But we intended to speak more particularly of guano. We think well of it, and use it, moderately. There is danger, however, that our people will get into a *furor* about it, and neglect the true sources of gain on their own lands. We hope to see no *hen*, or *pig*, or *multicaulis* fever on this subject, but that every cultivator will improve every possible way to swell his domestic manure heaps *first*, and then, as an auxiliary, he may carefully test the virtues of guano.

AGRICULTURAL EDUCATION.

Collegiate education, as hitherto directed, can hardly be said to have been available to farmers' sons, except as they were about to leave the employment of their fathers for other callings. No fault should, on this account, be ascribed to our colleges. They were established mainly for the purpose of educating young men for the learned professions. They have done this; have done it well; are still doing it faithfully and impartially, taking young men from all the walks of life, as well from the farm as elsewhere, and training them for higher fields of usefulness.

But while farmers, in common with all others, can educate their sons *for leaving the farm*, does not the public good require that they should also have the means of educating them *to stay on the farm*? Has not a want of this kind sprung up in the progress of our institutions? Is it not deeply felt by the friends of enlightened agriculture? and would not our colleges do well to meet it promptly? As they have libraries, cabinets, and courses of lectures already established, they could meet the exigency altogether more economically than it could be provided for by the establishment of institutions exclusively for that purpose.

The plan should embrace instruction in *Analytical Chemistry* in *Natural History*, and in *Theoretical and Practical Agriculture*. Instruction could be given in the first two, in connection with the regular collegiate course, without increased expense. The students in agriculture should be under the direction of an instructor appointed for that specific purpose. He should be at once scientific and practical—capable on the one hand of directing their studies, and on the other of showing them the best samples of all kinds of farm-work, done by himself. A portion, at least, of his lectures, should be in the open field, with hoe,

spade, or scythe in hand. He should be able to do anything that is to be done on a farm, and to give a reason for its being done in the right way. And he should be an economist, capable of showing how the cost of production may be diminished, and how crops may be expended so as to give the best return, both in pecuniary and in fertilizing value.

The employment of such a man would add something to the annual expenditures of a college. No other part of the arrangement would. Lectures on botany, chemistry, geology, natural philosophy, vegetable physiology, &c., can be given as cheaply to many as to few. It costs no more to keep up cabinets in mineralogy, geology and natural history for five hundred students, than for one hundred. The same is true of nearly every appliance for collegiate education. The economy of uniting agricultural departments with colleges already established, is a matter of great importance. If it is the duty of a State to educate its youth, it is no less a duty to educate them with a reasonable regard to economy. Funds for this purpose, whether from public or private munificence, should be applied as advantageously as possible towards the accomplishment of the object. For these reasons I have supposed that our colleges would do a work of immense public utility by providing for instruction in agriculture. There need be no rivalry between them, unless it be the rivalry of doing good. If each can furnish agricultural instruction for its own region cheaper than can be furnished otherwise, why should we not rejoice if the others can do the like for their locations respectively? It is infinitely better to sustain the institutions we have, than to create new ones to languish for want of support. Let the colleges of our country provide for agricultural education in their respective regions, and their own interests, if it be possible for them to have interests distinct from those of the public, will not fail to be advanced.

Why should not the young man, who can be spared from the farm for a single year, enjoy as rich privileges for that time, as those who pursue a prolonged academical course? Why should not he be educated for his profession as well as they for theirs? His profession is not unimportant; it is not more easily learned than all others; it requires a large amount of knowledge; and the very fact that, as a general rule, young men who are to become farmers, will take but a short course of previous study, seems to be a good reason why the best possible means should be furnished to them, that they may learn much in little time. Such means should be furnished at so cheap a rate, that the son of the poorest farmer in the country need not be debarred; and our established colleges should furnish them, because they can do it at less than half the expense of supporting separate institutions.—*Journal*.

CLOUDY SEASON.

Every part of the globe has certain seasons during the year, which come constantly, and regularly, at certain periods of the year; and which, although variable in their daily characteristics, have nevertheless a general character, which is somewhat uniform from year to year, and distinguishes them from the seasons of other periods. Here, in our own latitude, we have the winter season—the

spring season—the summer season—and the autumnal season.

In other parts of the world, they have rainy seasons, when, although it does not pour down all the time, yet there is more or less rain almost every day, and this is alternated with the dry season, in which no rain falls. In some latitudes, the wind sets in, and blows with little or no variation for months in one direction only.

In Peru they have a cloudy season, Humboldt says, that for several months, a thick mist obscures the firmament. Not a planet, not the most brilliant stars of the southern hemisphere, neither Canopus nor the Southern Cross, are visible. It is frequently almost impossible to distinguish the position of the moon.

If by chance, the outline of the sun's disk be visible during the day, it appears devoid of rays, as if seen through colored glasses, being generally of a yellowish red, sometimes of a white, and occasionally even of a bluish color. The mariner, driven onward by the cold, south current of the sea, is unable to recognise the shores, and in the absence of all observations of latitude, sails past the harbor's mouth which he desired to enter.

Except the usual variations of spring, summer, fall and winter, our latitude is not subject to such periodical onsets of rain, or trade winds, or misty and cloudy weather. It is as a general thing very clear, and with the exception of occasional clouds, and storms of comparatively short duration, we have no cloudy seasons, nor misty seasons, nor rainy seasons. The light of the sun, and moon, and stars, shines for the most part unobstructed, and with beautiful brilliancy. This is as conducive to health, as it is to the pleasure of the body, and although we complain of occasional cold winters, and backward seasons, these blessings alone are sufficient to counterbalance all evils of that kind. The health of both the animal and vegetable kingdom is intimately connected with light.

—*Maine Farmer*.

LOOK AT YOUR BEES.

If you desire early and strong young swarms of bees, you must see that they have plenty of honey during the latter part of March and up to the middle of April. *But honey alone is not sufficient.* The bees intend to lay up an abundant supply of pollen, or bee-bread, but if their store is short, and the season is backward, they are unable to find it in sufficient quantities for their own use and that of their young, whose nourishment chiefly depends upon it.

On the 23d and 24th of March, the days being clear and warm, we placed West India honey and loaf sugar melted together, before our bees, by setting a feeding box containing the mixture on a flour barrel, 20 feet from the hives. The feeding was suggested because one or two of the swarms were weak. Five swarms carried away a pint of the mixture in a few hours. The next day the box was replenished, and at the same time a tea-cup full of flour was laid on a shingle near the barrel; when the bees very soon forsook the honey and carried away the whole of the flour, and did the

same with an equal amount on the 25th. On the 26th, another cup full was supplied in the afternoon. During the succeeding night a gentle rain wet the surface of the flour, which was dried by the winds into a hard crust before 9 o'clock on the morning of the 27th. The bees came to it before ten, but they were puzzled to take it up as they had done, and it became a matter of curiosity to see what course they would pursue. Their instincts, however, did not fail them. Ranged side by side along the base of the mound, they soon perforated the crust, and long before night the excavation was nearly completed, and most of the flour carried away.

Bee-bread, or pollen, is collected and packed down for future use, and often covered with wax. Flour is a similar substance, and answers their purpose pretty well, therefore supply it.

For the New England Farmer.

BIRDS OF NEW ENGLAND.

THEIR PAST AND PRESENT HISTORY....No. 3.

BY S. P. FOWLER.

The late Alexander Wilson, the author of the "American Ornithology," was a disbeliever in the torpidity of swallows in the winter, and treats the whole subject with ridicule. In his history of our birds, he copies Doct. Williams's account of the chimney swallows, found torpid in hollow trees, in the towns of Danby and Bridport, as before written, but wholly omits to notice the one from Mr. Ramsey, from Hubbardston, so conclusive. He says, "I cannot, in the cases cited, see any sufficient cause for the belief of the torpidity of swallows. The birds were seen to pass out on the first of May, or in the spring, when the leaves began to appear on the trees, and, about the middle of September, they were seen entering the tree for the last time; but there is no information here, of their being seen at any time during winter, either within or around the tree." This is exceedingly unfair, on the part of Mr. Wilson, for it will be seen in the account given by Mr. Ramsey, from Hubbardston, that swallows were seen by him in March, when there was a deep snow upon the ground, and that the birds were actually examined, when inside the tree, and some of them had the appearance of being in a torpid state. Mr. Wilson admits, that the chimney swallow usually arrives in May from the south, and departs in September. Now I would inquire, how came these birds to be found in a hollow tree in Vermont, in a partially torpid state, in the month of March, with a deep snow upon the ground, if they had not hibernated there during the winter! Would they have migrated from the south, so early in the spring? Mr. Wilson, when writing upon the subject of the torpidity of swallows in winter, says, "Away with such absurdities! they are unworthy of a serious refutation. I should be pleased to meet with a man, who has been personally more conversant with birds, than myself, who has followed them in their wide and devious routes,—studied their various manners—mingled with, and marked their peculiarities, more than I have done; yet the miracle of a re-

suscitated swallow, in the depth of winter, from the bottom of a mill-pond, is, I confess, a phenomenon in ornithology, that I have never met with." Now, in point of fact, Mr. Wilson's knowledge of our birds, extended only through a period of nine years—to wit, from 1804 to his death, in 1813. And we strongly suspect he met a man, who was as conversant with our birds as himself, when he saw for the first time, in March, 1810, at Louisville, in Kentucky, the author of the *Birds of America*. Mr. Audubon's account of this interview and Mr. Wilson's subsequent notice of it, may be seen in the 1st vol. of Audubon's *Birds*, page 437. And he certainly "marked the peculiarities of our birds, when he made the discovery and described the Red Owl as a distinct species, since all ornithologists subsequent to his time have failed to distinguish it, and have ascertained that the Red Owl is no other than the Mottled Owl, in his juvenile years. We should think from reading Wilson's Life by Mr. Ord, that his biographer supposed that he would probably have become, had he have lived, a reformer in the Natural History of our country. And that all stories published in our Philosophical and Natural History transactions and Institutes, such as the torpidity of swallows, toads found deeply imbedded in the earth or rocks, the Gloucester Sea Serpent, &c., and all gross fictions [as he was pleased to call them] palmed upon mankind, the Paisley weaver was destined to expose. Doct. Barton, in a letter to the editor of the *Philosophical Magazine*, when alluding to the subject of the torpidity of swallows, says, "I have, at this time, in the press, a memoir on the migration and torpidity of these birds. I am confident that I shall be able to convince every candid philosopher, that great numbers of swallows, of different species, do occasionally pass into a state of torpidity, more or less profound. I do not suppose that all the swallows of North America become torpid. It is my present opinion, and it was my opinion when I published the 'Fragments' in 1799, that the swallows, in general, are migratory birds. But subsequent and very extensive inquiries have convinced me, that the instances of torpid swallows are much more frequent than I formerly supposed they were; and that there are two species of the genus *Hirundo*, which are peculiarly disposed to pass the brumal season in the cavities of rocks, in the hollows of trees, and in other similar situations, where they are often found in a *soporose* state. These species are the *Hirundo riparia*, or sand swallow; and the *H. pelagica*, which we call chimney swallow. There is no fact in ornithology better established than the fact of the occasional torpidity of these two species of *Hirundo*!"

From some cause not known, Doct. Barton never published, as he had promised, his "Memoir on the Migration and Torpidity of Swallows," and from this circumstance, Mr. Ord, the biographer of Alexander Wilson, infers that the Doctor was deterred from doing it, in consequence of the great light shed upon the vexed subject of the torpidity of swallows, by the author of "The American Ornithology;" and that he manifested great discretion in suppressing it. We have reason to suppose Mr. Wilson was not familiar with the habits of our birds, as they are seen in New England. I have not been able to learn, that he ever visited the north, with a single

view of examining its birds. He set out, he says, in one of his letters to Mr. Bartram, under date of Sept. 21st, 1808, for the Eastern States, in search of birds and subscribers, but how many birds he found the last of September, in New England, he does not inform us. The whole time spent by Mr. Wilson at the north, in the autumn of 1808, was less than two months. In his letters, sent home to his friends during this tour, he expresses the greatest contempt of the climate and habits of the people of New England; he says, "Lawyers swarm in every town, like locusts; almost every door has the word *Office* painted over it, which, like the web of a spider, points out the place, where the spoiler lurks for his prey. There is little or no improvement in agriculture; in fifty miles I did not observe a single grain or stubble field, though the country has been cleared and settled these one hundred and fifty years. In short, the steady habits of a great portion of the inhabitants of those parts of New England through which I passed, seem to be laziness and law bickerings. My journey through almost the whole of New England, has lowered the Yankees in my esteem. Except a few neat academies, I found their school-houses equally ruinous and deserted with ours; fields covered with stones; stone fences; scrubby oaks, and pine trees; wretched orchards; scarcely one grain field in twenty miles; the taverns along the road dirty, and filled with loungers, brawling about law suits and politics; the people snappish and extortioners, lazy, and two hundred years behind the Pennsylvanians, in Agricultural improvements. Mr. Wilson found Boston so filthy, that he would not disgust his friend with a description of it. The draymen in shouting to their horses, made such a hideous howling in the streets of Boston, at every corner, that he was reminded of some miserable wretch, expiring on the wheel." Upon reading this account, we were led to think that if Mr. Wilson was not better acquainted with the habits of New England birds than he was of the character of the people, not much reliance should be placed on his opinion, in regard to the torpidity of swallows. For they are chiefly, if not wholly, to be found at the North. It would seem Mr. Audubon's mind was not settled, in regard to this subject. For we find in his 1st vol. of the "Birds of America," page 179, when speaking of the Cliff Swallow, where he says, "I embraced every opportunity of examining their habits, carefully noted their arrival and disappearance, and recorded every fact connected with their history, being extremely desirous of settling the long-agitated question, respecting the migration or supposed torpidity of swallows."

In the spring of 1836, the writer of this article witnessed what he has supposed to be an instance of the torpidity of the swallow. By referring to a diary kept that year, I find the date of this occurrence the 10th of April. It was upon a fine spring morning, succeeding a pleasant day, I discovered about sunrise two White Bellied Swallows [the *Hirundo viridis* of Wilson] fluttering on the ground, and unable to fly. They were easily caught, and examined, as it was my impression at the time, they had been injured by a cat. Upon examination I was satisfied this was not the case. They were wet with mud and water, and after being wiped dry, they were taken into the house,

and placed on a window in the sun. In a few hours they recovered their consciousness, and flew out of the window into the open air. In the vicinity where these birds were found, was a pond filled with mud and water. The mud found upon these swallows was not the black dirt of the garden, but was a slimy mud. We have since seen Bank Swallows, under circumstances that have led us to suppose they were in a partial state of torpidity. Such as sitting on willow twigs, by the side of rivers and streams, a few inches from the water; at one time as early in the spring as the 25th day of March. Upon the whole, I am inclined to the belief that the subject of the torpidity of the swallow is still an open one, and not by any means so effectually closed, as Mr. Wilson and some others had supposed. S. P. F.

Danversport, Jan. 10th, 1853.

[TO BE CONTINUED.]

REMARKS ON BUDDING AND GRAFTING.

Buds should always be set before the stock or bud has ceased to grow for the season. In setting pears in pear stocks, it is important to commence earlier than with apples, as the former do not grow so long as the latter. Plum and cherry stocks also stop growing early, unless the development is kept up by stimulating manure, and careful tillage. Apple trees, if healthy and in a good growing condition, may be budded late in August. Peach trees continue to grow even longer than apple trees, and it is never advisable to bud them early. In all trees, when budded, there should be sufficient sap to cause the bark to peel freely. Of the proper time for performing this operation in the several kinds of trees above mentioned, the ready peeling of the bark is the only criterion to be relied on. In grafting, it is frequently necessary for those who are engaged extensively in the business, to preserve scions for some months before the time arrives for inserting them. For this purpose, no material has yet been discovered superior to damp sawdust. In regard to its efficiency the editor of the *Albany Cultivator* says:

"The mode first suggested to us by T. G. YROMAN, of Walworth, N. Y., of preserving the scions of fruit trees in moist sawdust, has proved superior to any other. It is better than damp moss, in the facility with which the scion may be perfectly imbedded in it, leaving no interstices; and it excels moist, sand it being lighter, more spongy, and entirely free from a grit which may injure a knife. We have without difficulty preserved scions, which were cut in the summer for budding, till the following spring, and inserted them as grafts with entire success; and we have kept winter cut grafts till midsummer perfectly fresh, and employed them successfully in budding. A bushel of sawdust will retain its moisture for many weeks nearly unaltered, but water must not be applied too copiously or water soaking and decay will be the result. The north side of a building or a cool cellar is the best place."

In *Kenrick's Work on Orcharding*, we have the following remarks on INNOCULATING;

"Innoculating is the operation of transferring any desirable variety of tree upon the stock of an inferior or wild variety. The operation is principally practised on small trees, and only during the time the sap flows freely, and chiefly during the months of August and September. Select for the buds the ripest young twigs of the present year, and cut off the leaves, leaving the footstalk entire. Having selected a smooth place in the stock, make a perpendicular slit downward, quite through the bark, an inch or a little more in length. Make a cross cut at the top of this slit quite through to the wood, a little slanting downward; next with the ivory haft of the budding knife, raise the bark on both sides from top to bottom, being very careful not to injure in the least the cambium or sap wood. Next and with expedition proceed to take off a bud; this is effected by entering the knife a little more than half an inch below the bud or eye, quite through the bark, and separating the bark from the wood to the same distance above the eye, always leaving a very thin slip of wood of about one-third of the length of the bud, this thin slip of wood occupies the middle section of its length. The bud is to be inserted in the stock to the bottom of the slit, and between the bark and wood: and the top of the bud being squared even with the cross cut, every part except the eye, is firmly bound and covered with strong wet bass string or matting."

For the New England Farmer.

MANURES AGAIN.

MR. EDITOR:—Your very pleasant correspondent, B., seems to doubt the correctness of my criticism upon his fireside talk. Now, sir, I would not set myself up as an instructor of others, nor would I say a word that looks like controversy with so courteous a writer, nor would I cavil about words or forms of expression. Perhaps I did not make myself clearly understood. My object was to inquire whether the nutriment which vegetables derive from the soil may not, *nearly all*, be returned to the soil, as food for future crops, *after* the vegetables have been used as food for animals. I believe it is generally conceded that vegetables derive their carbon from the atmosphere, and their oxygen and hydrogen from water. So that as these elements are not derived from the soil, they need not be taken into the account in this inquiry.

But, notwithstanding the apparent Irishism contained in the remark that follows my query, yet I see no reason to doubt the correctness of the general proposition contained in the query itself, which was—"If the manure, liquid and solid, produced by feeding on the estover of an acre would not return to the ground nearly the value it has given out, of mineral matter?"

Suppose "the cow lays in her bone and milk from the lime of the cornstalk?" In the adult animal, do not the excretions go on *pari passu*, with the secretions? Are not the particles of old bone, muscle, hair, &c., carried off, as fast as new particles are deposited? At the end of the year, is there more bone and other tissues than there were at the beginning? After the milk has passed through the calf, the pig, or the human stomach, does not its lime find its way back to the soil? And do not the bones, hair, wool, muscle, &c., of the
 h the same destination at last? Have

not ground woolen rags and bone dust become important articles of commerce because of their value as fertilizers?

As to the loss of mineral matter by the urine, this will not take place to any great extent—when the stable has a proper cellar furnished with suitable materials for absorbing this excrement. Nor will there be much loss even in the yard, when this is properly provided with soil and carbonaceous matters designed to absorb it. Evaporation is supposed to leave the mineral matter mostly behind. So that the loss of mineral matters, except the small amount of potash and soda carried off in the perspiration, really amounts to very little, and even the potash and soda of the perspiration mostly dries upon the skin and hair, and is rubbed off by the card and brush. But it seems B. did not say "mineral matters," but "fertilizing matter," and he refers to the carbon, oxygen, hydrogen and nitrogen contained in the cornstalk. The constituents of vegetables may be divided into three classes. 1st, The non-nitrogenous, as woody fibre, sugar, starch, fat, oil, &c. 2d, The nitrogenous, as albumen gluten, caseine &c.. And 3d. The mineral, as lime, silex, potash, sulphur, &c. Most vegetables contain but a small amount of the 2d class, and what they do contain, is chiefly in their seeds. I have never seen a chemical analysis of corn or the corn stalk. But wheat straw contains 960 parts of organic matter in a thousand, and only 4 parts of nitrogen. Oat straw contains 970 parts of organic matter, and only 3 of nitrogen. Wheat itself contains 20 parts of nitrogenous matter in a hundred. Oats contain 14. If we may judge at all from analogy, we may suppose the corn stalk to consist of woody fibre, sugar, starch, lime, silex, potash, and traces of nitrogen and sulphur. But woody fibre, sugar and starch consist wholly of carbon, oxygen and hydrogen, and may be converted the one into the other, by changing the proportion of their elements. Probably cornstalks contain some 950 or 60 parts in 1000 of organic matter, mostly carbon. But carbon has of itself but little value as a manure. Its chief value is as a retainer of ammonia, for which it has a strong affinity, and as a vehicle by which this, and mineral matters, are conveyed to the roots of plants.

Some have denied that carbon is ever taken up by the roots of plants. It certainly never is, except in the form of carbonic acid dissolved in water, and probably in that form only in small quantity, except when the roots are stimulated by nitrogen and mineral substances. The carbon used in building up the frame work of plants and trees is mostly obtained from the carbonic acid contained in the atmosphere, by means of the leaves. By a curious chemical process in the leaf, the carbon is separated from the oxygen, and each element is appropriated to the use for which it is wanted. Hydrogen and oxygen are also obtained by the decomposition of water in the leaf, to which it is conveyed from the soil—and by which it is absorbed along with carbonic acid, from the atmosphere. From all which it results that the chief value of the corn stalk as a manure, resides in the mineral matter it contains. If B. would enrich his soil, and thus secure a large crop by burying his cornstalks in the ground, he must, to use another Irishism, bury the corn along with them, and then he will get a tolerable amount of nitrogen—the

very element in which the chief value of animal manure consists. Indeed, European farmers are using rape seed and oil cake as a manure, because they are rich in this element. The peculiar value of animal manures, I take it, consists in the nitrogen they contain. Their mineral elements are indeed valuable. But these may be obtained at a cheaper rate, from other sources.

I have not time, had I the ability, nor will you give me space, Mr. Editor, to go more fully into this copious subject; and I will close by saying that just in proportion as friend B. can make his farm furnish nutriment to his animals to such an extent, that they shall afford nutriment to *successively increasing crops*, will it prove a "mine of wealth" to him. But if he has to raise one crop to feed his animals, and another to feed his crops, he had better dig in some other mine.

In order that land may maintain itself at a high degree of productiveness, it must yield abundant, nay luxuriant crops. It is only such crops that can return to it the "fertilizing matter" necessary to keep it at the maximum point of fertility. This I suppose to be the standard at which every farmer should aim, and just in proportion as he approaches it, will his farm prove to him a mine of wealth. Permit me to add a short extract or two from Stockhardt's Field Lectures, a book which I should be glad to see in the hands of every farmer who would understand the principles of chemical science, as they apply to the processes of agriculture.

"There are probably few farms on which natural manure is produced in such plentiful quantity as to suffice for perfectly manuring their surface. As long as a farm has not reached the *highest point of cultivation*, every means must be pronounced acceptable, which puts the farmer in a position to provide his fields with more liberal dressing than he is able to give them from his own supply of home produced natural manure. Whoever seeks to *give quickly* at this state of cultivation, must make extensive use of those auxiliary or artificial manures, that are now offered him by commerce. For if by the agency of artificial manures, fields are speedily brought into a state of greater productiveness, *more straw and fodder* will also be produced; and by their assistance the stock can be so increased and the supply of natural manure so enlarged, that the importation of artificial manures is no longer necessary."

J. R.

For the New England Farmer.

GRAFTING ON THE THORN.

BY C. GOODRICH.

I have lately seen an article in your paper recommending the common New England thorn tree, as stocks for pears. As the writer merely gives it as a matter of opinion, rather than experience, it may lead many to try experiments where disappointments are sure to follow.

The whole family of thorns, Mountain Ash, and Shadberry, I believe will generally prove worthless for dwarf pears; they may occasionally succeed, but each one grown will cost the owner more than a dozen good trees on pear stocks.

Some fifteen years since, I procured two or three dozen thorn trees, planted them with care, and the next season grafted with pears; about one-half

grew, which had a sickly existence a few years and died.

My next experiment was with Shadberry, with no better success. In 1851, I planted 56 Mountain Ash trees—averaging 1½ inches in diameter—and grafted near the ground with some eight varieties of pears. All grew very finely, but in September, they began to appear sickly, which so increased, that in 1852 all were dug out and thrown away. I last year purchased the largest nursery on the east side of Lake Champlain, some twenty miles from Burlington. Among the stock were twenty thousand pear seedlings and some thousands of grafted trees of all ages and sizes. I noticed a number of scraggy thorns, and on inquiry the intelligent owner told me he had for ten years tried to raise pear trees on thorn stocks, had tried more than one hundred, but had not succeeded in raising but one tree, which he showed me. This had a sickly growth; I transferred it to my garden last spring but it has gone the way of all others.

On large vigorous trees, and grafted in the tops, pears will grow well on the Thorn, Mountain Ash, or Shadberry, for a few years. I once grafted a thorn tree of this character, and the fourth year picked four bushels of pears from it. All large trees of this class, in rich soils, are valuable for grafting with the pear—but for "dwarfs," or standards, grafted when young, thorn stocks generally, are worse than useless. The Mountain Ash and Shadberry, I think of the same general character as the thorn—but have not seen experiments enough to give an opinion of their value for stocks for pears.

It is said that the pear will graft well on the apple, but "outgrows" it. This is all a mistake. The sap flows freely from the apple to the pear and produces a vigorous growth, but not returning freely, the apple stock is dwarfed. If one wishes to try the experiment, he will find, by grafting apples and pears on the same tree, that although the pears at first will outgrow the apples, the limbs on which apples are grafted will grow four times as fast as those grafted with pears. But few varieties of pears will grow on apple stocks. I have tried many sorts, but never had much success with but one. The old Summer Bon Chretien, (Good Christian,) a very irregular scraggy grower, grows as readily on the apple, as pear stocks, and bears well a few years on old trees, or until the limbs on which they are grafted become too much dwarfed.

If any one can give any successful experiments of raising trees on thorn stocks, I shall be glad to see them; but until I see practical demonstration, will caution all of depending on the thorn as a stock for pears.

Burlington, Vt.

For the New England Farmer.

A QUESTION FOR THE CURIOUS.

STR.—I have a small pear tree in my garden, which the last season bore fruit of good quality, but not pears, although nourished and matured by the sap of the tree, and on the wood produced by the pear graft or bud, nor were there pears in any part of the tree which came to maturity, what fruit was it?

HORTICULTURIST.

Groton, 1853.

REMARKS.—Well, we rather guess 'twas a pear!

BEURRE DE ANJOU.

The above beautiful portrait was taken from a pear furnished us by the Hon. MARSHALL P. WILDER, from his garden in Dorchester, and is a faithful representation of the fruit, leaves, and a portion of the branch upon which it hung.

Synonym—Ne plus Meuris of the German and French Catalogue.

Size—Large.

Form—Obovate, obtuse, pyriform, outline and surface often slightly irregular.

Stem—Short, thick, inserted without much depression.

Calyx—Moderately sunk in small uneven basin.

Skin—Greenish-yellow, coarsely dotted, russeted at the stem and eye, and with a brownish red cheek on the sunny side.

Flesh—Yellowish white, very juicy, melting and buttery.

Flavor—Rich sub-acid, with a delicious aroma resembling that of the Brown Beurre.

Season—November to January.

Class—"Best."

Tree—Hardy and productive either on the pear or quince stock.

The Beurre de Anjou was introduced by MARSHALL P. WILDER, from Europe, about ten years ago. Mr. W. considers this variety one of his most valuable acquisitions, and worthy of general dissemination.

NORTHERN SPY APPLE.—D. TAZER, in the same paper says the "past winter was one of unusual severity to fruit trees in the nursery, destroying many of our Baldwins and other varieties—and the Northern Spy, standing in rows by their side within four feet of Baldwins, remained almost entirely without injury. They possess one advantage over any other kind with which I am acquainted; that is, being about ten days later in putting out in the spring, making the risk much less of injury from late frosts."

For the New England Farmer.

LIVE FENCES.

MR. EDITOR:—Some questions have been asked concerning hedges in the columns of your paper, which I will venture to answer. "Are live fences cheaper than other fence; what is the best kind; where the seed can be had; at what price; the time and mode of planting, and the whole mode of operation?"

I think live fences are as cheap or cheaper than wood fence; that is, if wood will bring a fair price out for any other purpose; but if wood is very plenty and comparatively valueless, then I should think it would be cheaper than live fence; if stones are plenty—and in some places they are so plenty that we are glad to get rid of them the best way we can,—then I should think it would be best to use stone instead of hedge: I am now speaking of division fences and the like.

Many use hedges of some kind to enclose front gardens, or even vegetable gardens, for by the use of evergreen hedge, we may obtain a sheltered position for a garden, enabling us to raise early vegetables with greater success. The best kind of plant for fence is Buckthorn, (*Rhamnus catharticus*) it is perfectly hardy, and does well in wet or dry land, will accommodate itself to most any situation, and is entirely free from borers; forms, with good care, in a few years, an almost impenetrable hedge and altogether I think it is the best thing known for live fences. The seed can be had at Ruggles, Nourse, Mason & Co.'s, or at most any seed store; or the plants of suitable size can be had reasonable of any of the nurserymen in this vicinity; the price for the seed is one dollar per quart, washed out separate from the pulp; this is not a high price.

As for the time and mode of planting, I will give you my method, though it may differ from the practice of some others;—"doctors sometimes disagree"—all I can say is that the plan I shall recommend has done well with me. I take my seed after it is washed free from the pulp, and mix it with sand and loam, about half of each, using enough to prevent the seed from heating; after having thus mixed them, put them into a tub or box, and place them away in the barn-cellar or some such place, looking out that the mice don't get at, or water run in, to rot them. In the spring prepare the ground by first spreading on manure, then plow it well, that it may be well pulverized, after which strike a shallow furrow and manure again slightly in the drills, mixing it up with the soil, and then sow the seed as peas are sown, not too thick, for the plants will not grow so stout; this should be done as soon as the ground is dry enough to work well. It is unnecessary to say that they should be kept entirely free from weeds. Should they make good growth, many of them would do to set up in hedge the next spring, but it is generally best to let them grow two years in the seed bed. In order to have a good hedge of Buckthorn—for of that I have been speaking—it is necessary first to prepare your trench where your plants are to be set, by digging it from three to four feet wide, and not less than two feet deep, that is if the soil is not very good,—and filling it up with good loam, with a liberal quantity of well decomposed manure compost. This is necessary in setting a hedge of any kind, if you want it to flourish.

The Buckthorn plants, before setting, should be cut down to within two or three inches of the root, mere stubs; then in regard to setting, some, where they want a broad hedge, set them in double rows, but if set in a single row as they ought to be, four inches apart—it generally makes a hedge thick enough. They will make some growth the first year they are set, which should be cut down, and so continue to cut them down allowing them to gain two or three inches a year until the bottom becomes thick. All hedges need clipping at least once a year, many clip twice. After the hedge has attained the desired height and shape, it is but little work to keep it in order, clipped, as I have before said, every year, manured occasionally, and the grass and weeds kept out, is all that is necessary.

Having spoken of hedges for fence, I will now say a few words concerning fancy or ornamental hedges, which when well taken care of, are really beautiful objects. For such hedges, *Arborvitae* is much used, does very well, but is liable to be killed out by the winter. Privet or *Prim* is one of the best things for an ornamental hedge that I know of, and I am surprised that it is not used more. Hemlock makes a very dense and beautiful hedge, admirable for screens around a garden and other places. *Arborvitae* is used in the same way. Norway Spruce is said to make a good hedge, but is now too expensive for that use. But enough for the present,—may refer to the subject some other time. J. F. C. H.

Newton Centre, March 24, 1853.

For the New England Farmer.

MARYLAND FARMING.

MR. FARMER:—Knowing you to be "national" in your agricultural views, I trust you will take an interest in what pertains to this favored region, the sunny South. It must be admitted that nature has been partial in the distribution of her gifts. I have strong attachments to New England,—to the Old Bay State, I would not exchange her for any State, or nation, I have yet seen. No, not for all put together. Yet Massachusetts owes her wealth, her institutions, and her peaceful, happy hours, not to her climate, nor to her soil; but to the character of her population, which secures wealth—the comforts and luxuries of life—which acquires knowledge, and makes it available in every apartment of human industry, in spite of natural disadvantages. Yes, the Yankee not only compels the rocky and naturally sterile soil, to yield an abundant harvest, and every stream of water, by propelling machinery, to become a source of wealth, but, by his alchemy, he transmutes the very frosts of winter into gold.

But I took my pen to write of Maryland, not of Massachusetts. The condition of agriculture in this State is generally bad. The *skinning* system has been practiced here, as in New England, till a large portion of the territory has been so far reduced as not to pay for cultivation. But happily, here, as in the northern States, farmers are beginning to find out that there is a better way. Within the last five years a great change has been effected. It has been ascertained that worn-out lands may be effectually reclaimed by the application of lime. Limestone is abundant in most of the counties of the State. And lime may be ob-

tained in almost every part, for 12½ cents per bushel. The mode of applying it, is by sowing it broadcast. The amount thus applied, varies from 75 to 100 bushels to the acre. Land thus dressed, at an expense of from \$12 to 15 per acre, I am told, will produce good crops, without any additional dressing, for ten years.

In many portions of the State, I am informed, the price of land has advanced fifty per cent. within five years. New England farmers manure for corn. The Maryland farmer manures for wheat, and leaves his corn crop to take care of itself. Corn is planted upon the lightest soil and receives the least attention. The land is imperfectly plowed, and after planting, the corn receives very little attention, except that a shovel plow is passed between the rows two or three times.

With such attention, corn could not be raised in New England at all. I am by no means certain, however, that the labor we bestow upon this crop would not pay well here. Where 25 or 30 bushels are harvested now, I believe, with proper cultivation, 50 might be secured. It was early instilled into my mind, as an agricultural tenet, that "corn cannot be cheated." Two bushels of corn may be raised here, at less expense than one, on the best corn lands in Massachusetts. The same I think is true of many other crops, so that if the farmer wishes to make money, and nothing else, he will do well to leave Massachusetts and come to Maryland.

I visited a few days since, the celebrated farm of Mr. George Patterson, of Carroll County. Truly, that is a farm as is a farm. The tract contains seventeen hundred acres, all in one body, lying nearly in the form of a square. The surface is gently undulating, nowhere too abruptly hilly, nor too level. On the whole tract there is very little, if any waste land.

The mansion, which is an imposing structure for a farm-house, and so located as to produce a most pleasing effect upon the beholder, occupies an eminence in a central position, overlooking nearly the whole territory. The landscape is beautifully diversified with hills and dales, cultivated fields and forests. In the season of foliage, the scenery must be enchanting. There needs but a castle, with a high tower, a moat and a draw bridge, to give it the air of a baronial estate. But in the absence of these lunar fardels, for which feudal lords were wont, whilom, to fight and bleed, the lowing herds of cattle, the bleating flocks of sheep, the prancing steeds, the grunting swine, and the cackling fowls, indicate "the piping time of peace;" that the sword has given place to the plowshare, that rural and civic duties have succeeded to the reign of Mars and Bellona.

A beautiful rivulet divides the farm, which is made to pay tribute in the way of converting the proprietor's grain into flour.

Thoroughness is a prominent characteristic in every department. The adage, what is worth doing at all, is worth doing well, seems to be a ruling principle of action. The fences are a great curiosity. As far as I saw, they were all made of chestnut and oak rails, about ten feet in length, laid up Virginia fashion, from ten to twelve rails in height, with a pair of stakes at each corner. The proprietor has learned, from poor Richard, or from some other source, that an ounce of prevention is better than a pound of cure. 'Twould be

well for all farmers to learn and practice the same lesson. With such fences, there would be no breachy cattle, and consequently no losses from their depredations.

The barns are neatly and substantially built, and most of them after the same model; being 36 feet by 18, and wholly devoted to hay and grain.

But that is a small barn, says the New England farmer. Very true. But what there lacks in size, may be made up in number. The barns are all numbered, and I saw No. 47, and was told there were 50 in all, on the farm. Of this number, several are devoted to the sheltering of stock; for instance, one to milch cows, one to working oxen, one to horses, one to sheep, and so on. These are much larger and specially adapted to the purposes for which they are used.

No man has done more for the introduction of good stock and improvement in the breeds of cattle, in this country, than Mr. Patterson. He has spared neither pains nor expense. He seems to till the earth as I think every man should, not solely for the purpose of extracting wealth therefrom, but *con amore*,—for the sake of beautifying it,—for the sake of developing and perfecting its resources,—for the sake of multiplying luxuries and increasing the comforts of human society. He has devoted to his work intelligence, the results of extensive and accurate observation, together with the triumphs of science and art. He is now reaping a rich reward.

Of his stock, the nature of his soil, and his method of cultivation, I may write hereafter.

Yours,

R. B. H.

REMARKS.—Please to do so—and fill out the above initials, so that we may know to whom we are indebted for such lucid and interesting descriptions.

For the New England Farmer.

TRANSPLANTING.

MR. EDITOR:—Sir,—As you are very good to give advice and counsel to the needy, through the columns of your paper, I beg leave to propose two or three questions. I wish you to tell me what to do to cherry trees, to have them bear good, sound fruit and prevent them from being wormy? Also, the best month in the year to set out fruit and shade trees, viz: Maple, Elm and Spruce? In so doing, you will confer a favor upon a constant reader of the *New England Farmer*.

Deerfield, March 25, 1853. G. W. MANN.

REMARKS.—Keep your cherry trees healthy and vigorous by manure and cultivation, and keep insects from stinging the fruit if you can.

Set your trees as early in the month of April as the frost will permit. Directions how to do it were given in the *Weekly Farmer* of March 26. Do not let the sun shine or the wind blow on the roots of the evergreens a moment. Keep them covered with earth, wet moss, matting, or something of the kind, till the moment they are set back into the ground.

EGGS.—Mr. EDWARD ABORN, of Providence, R. I., has sent us three eggs, laid by one of his

Shanghai hens, (of Forbes's importation.) Two of the eggs are not above the usual size of hen's eggs, but are very heavy, weighing, one $2\frac{1}{2}$ the other $2\frac{1}{2}$ ounces. The third is of a very large size, weighing 4 ounces, and measuring $8\frac{1}{2}$ inches one way, and 5 $13\text{--}16$ inches the other. Mr. Aborn will please accept our thanks for the above.

For the New England Farmer.

THE VALUE OF SULPHATE OF ZINC (WHITE VITRIOL) TO THE FARMER.

Having formerly been a practitioner of medicine, my knowledge of the properties of the above article has led me to some knowledge of its value as a topical application in the farm yard.

At one of our Annual Agricultural Exhibitions a year or two since, I met with a farmer, who, I remembered, had the previous year exhibited a cow whose fine bag had attracted my attention, and which it seems always gave an abundant yield of milk after calving, which was regularly and seriously diminished by the difficulty of milking occasioned by her teats becoming sore not many weeks after the calf was taken away. He informed me that he had made the application to her teats which I had recommended the year before, and that it had speedily and entirely cured the teats and that they had remained perfectly well ever since. I had entirely forgotten having recommended anything, and he could not remember the name of my prescription; but upon my repeating one or two articles which I thought most likely to have been suggested by me to him, he confidently caught at the name as I repeated it of the article above mentioned as the one which he had so successfully used. It was not many months after that, my hired man complained of a similar difficulty in a valuable cow owned by myself, causing her frequently to raise her foot while being milked, and preventing thorough milking of the affected teat. Recalling to mind the instance above mentioned, I promised the man a remedy for trial; but other cares led me to postpone its preparation until I found after two or three weeks that the sore or excoriation on the teat was of the size of a finger nail. I then dissolved perhaps a teaspoonful of sulphate of zinc in a half pint of water, and directed my man to apply it *after* each milking, by means of a soft rag saturated with the solution. It was four or five days, I think, (but possibly a week,) thereafter, before I thought to inquire as to its effects, when I confess I was as much surprised, as my man seemed pleased, to find a perfect cure effected and natural and healthy appearing skin in place of the excoriation or sore skin. This occurred some time last summer, I should think about July or August, and when I left home the last of January, she had been milked regularly since that time without the slightest return of soreness.

The hand of the man who milks is usually suffered to be applied dry to the teat, and is often hardened by hard work, and it is not surprising that the friction occasioned thereby (and by a very different surface from the moist mouth of the calf—the milker designed by dame nature) should occasion inflammation in the skin, and a consequent cessation of the slight oily secretion natural to the pores of the skin of the teat. The sulphate of

zinc is a decided astringent, and free from the objectionable properties of some mineral astringents. Again; I had a litter of Suffolk and Mackay pigs littered last autumn, at that season when a hot sun following cold nights is liable to produce irritation and cracking of their tender skins, and a consequent thick black scab on the back, while their tails become an entire scab and drop off—Five of this litter were thus affected. They looked as if they had been lying or rolling in black mud, but the pen was perfectly dry; it increased from day to day, and the state of the tail also satisfied me that they were affected by some disease of the skin, I knew not what. I therefore resorted to a book upon the breeding and diseases of this animal, and found the affection well described and accounted for, but the treatment very unsatisfactory to me. I determined therefore to try the zinc, as I thought it reasonable and probable that in this instance also it would prove useful. Upon removing the little things from the pen, we found their backs occupied by scabs of great thickness, and so nearly touching each other as to present the appearance of an uniform black patch; but the skin was discoverable in the cracks between each scab or row of scabs, and the scabs we found surrounding and involving the hairs. I had prepared the zinc by mixing perhaps a heaping tea-spoonful with a lump of hog's lard of the size of a goose egg, incorporating it thoroughly with a case knife. This was thoroughly rubbed upon the parts affected, and the pigs returned after each application to their pen. It was repeated every other day, until it had been applied three times; after which, the thick scabs disappeared from four of the five, leaving the skin in a natural state, with the exception of a very slight blush of red where the scabs had been. But this shortly disappeared. The fifth was one which we had brought up by hand, and was not cured until the application had been made five or six times. The tails were hopelessly lost, except one or two where the root of the tail alone was affected. The others, when we commenced with the zinc, had the whole tail involved and cracked and looking as though roasted (not brown) but to blackness.—The speed with which the cure was effected, considering that the scabs were at least an eighth of an inch thick, and that the pigs were continued in the same exposure where the disease originated, leads me to feel confident that the cure could not be solely attributable to the lard, which I have no doubt would be so far servicable that with longer time it might or probably would, remove the difficulty. I sold the little fellows at five weeks old, for \$5 a pair.

But to ascend from cows and pigs to a higher order of beings for whose sake it may be worth while to possess and to use this preparation of zinc. Suppose a mother to have given her young child an orange to amuse it or to eat, and not being watched, the little fellow has eaten the peel as well as the pulp. Or, suppose that it has eaten some other equally indigestible article, and that its stomach and delicate nervous system rebels against the unwelcome intruder. The child is found before long, as sometimes happens, in a fit or convulsion. It is laid upon the bed and seems to return to consciousness, but another and another fit succeeds. The doctor is sent for, but half of our farmers live one or two miles distant from

the doctor, and half the time the doctor is not at home. In such a case, what a relief to the parents and household it would be, to know just what the doctor would do if there, and to have the remedy at hand.

Let them dissolve (according to the age of the child) from one-twelfth to one-fourth of a teaspoonful of sulphate of zinc in a great spoonful of water, and give it to the child from the spoon; (for if a fit should occur, it might bite a piece from a cup or glass) and in from three to five minutes the contents of the stomach will be evacuated, the cause removed, and nothing further but rest is needed. Its operation would probably be hastened by giving drink of warm water in order to slightly distend the stomach. If it does not operate in five minutes, the dose should be repeated until the stomach is evacuated. It might be well to give from two to six drops of laudanum afterwards, to allay any irritation of stomach caused by the zinc or the indigestible food, especially if there is tenderness upon slight pressure on the pit of the stomach.

FARM ACCOUNTS.

We have been permitted to look at a *Journal of Farm Accounts*, kept by D. TENNEY, Esq., of Sutton, commencing with the year 1822. Mr. Tenney has divided his farm into small lots, to each of which he has given a name. This name is entered on the top of the left-hand page of the journal, together with the amount of land which the lot contains. Then follows the account as set forth below. This lot is entitled "Young Orchard," containing *three-fourths* of an acre, and the profits are given for each year, from 1844 to 1852, inclusive. We have selected a lot showing quite favorable returns; but every lot shows a fair gain on the capital and labor invested. In the "Young Orchard" lot, in

1844, the profit was.....	\$47.00
1845, " "	16.40
1846, " "	78.40
1847, " "	57.38
1848, " "	101.59
1849, " "	60.18
1850, " "	139.50
1851, " "	181.15
1852, " "	79.06

The account is kept in the following form :

Left-hand Page.	Right-hand Page.
1852. By 10 days work picking apples, at 75 cts., \$7.50	1852. By 197 bushels of winter apples, at \$1—\$79.00
	125 do. cider apples, at 6c, 7.50
	\$86.50
	Deduct labor, 7.50
	\$79.00

In 1851, the apples sold at the door for \$2 a barrel, while in 1852, they only brought \$1, after being transported to Worcester.

The Journal contains accounts kept with various kinds of land, where it was reclaimed, as well as old land, and the results are all favorable. If farmers would adopt Mr. Tenney's mode of keeping accounts, we think they would find better returns from their farms than they have been in the habit of giving them credit for.

ANALYSES OF CLAM AND OYSTER SHELLS.

MESSES. EDITORS :—In your January number of the "*Plough, Loom and Anvil*," is a brief notice of the application of oyster shells as a manure for fruit trees. That those who use them may know what they are adding to their soil when they apply them, I here send you for publication their analysis, together with the analysis of the clam shell.

In the vicinity of the sea-coast and in the neighborhood of large towns, the common clam and oyster shells are quite extensively used by farmers as a manure. They are sometimes thrown upon the land whole, sometimes previously broken into fragments, and often burned. As a general rule, the latter method may be considered preferable to either of the others.

Soils, however, containing already a sufficient quantity of lime for present demands, and where the object is merely to compensate for the gradual waste, shells unburned may answer quite as good a purpose as those which have been burned. When used before burning, owing to their compact texture, they are acted upon but slowly by the ordinary agents to which they are subjected, and hence it requires a much larger quantity of them than of burned shells to exert, in a given time, the same degree of influence upon the soil. Unburned, their effects are not materially different—throwing aside the small quantity of animal matter and soluble salts they contain—from ordinary limestones broken equally fine and disposed of in a similar manner.

Before burning—omitting moisture—they are made up principally of carbonates, with a small quantity of organic matter, phosphates, sulphates, and chlorides. The process of burning expels nearly all of the carbonic acid and organic matter, with some of the chlorine, leaving the phosphate, sulphates, and a small amount of chlorides and carbonates. The rest, lime, which makes up nearly the whole, is in a caustic state.

As the composition of these shells, both before and after burning, may be of some interest, I here give them :

The common *clam shell* (*Venus mercenaria*)—100 parts of the dry unburned shell gave of

Silica.....	none.
Phosphates of iron, lime and magnesia.....	1.250
Carbonate of lime.....	69.804
Sulphate of lime.....	0.816
Lime, probably combined with organic matter.....	13.507
Magnesia.....	1.406
Potassa.....	1.847
Chloride of sodium.....	6.101
Organic matter.....	6.650
	100.614

The same shell, burned till the organic matter and carbonate acid were nearly all expelled—100 parts gave of

Silica.....	none.
Phosphates of iron, lime and magnesia.....	1.686
Lime.....	78.610
Sulphate of.....	1.210
Magnesia.....	2.078
Potassa.....	2.816
Soda and chloride of sodium.....	10.386
Carbonic acid.....	3.043
Organic matter.....	trace.
	99.999

Shell of the common oyster (*Ostrea borealis*)—100 parts of the fresh shell, deprived of water, gave of

Phosphates of iron, lime, and magnesia.....	0.842
Carbonate of lime.....	86.208
Sulphates of lime.....	2.061
Lime, probably combined with organic matter.....	6.035
Magnesia.....	6.338
Potassa.....	0.191
Soda and chloride of sodium.....	0.690
Organic.....	3.618
	99.613

The same shell, burned till nearly all the carbonic acid and organic matter were expelled—100 parts gave of

Phosphates of iron, lime, and magnesia.....	0.800
Lime.....	91.918
Magnesia.....	0.560
Potassa.....	0.316
Soda and chloride of sodium.....	1.144
Sulphuric acid.....	2.011
Carbonic acid.....	2.050
Organic matter.....	trace.
	98.799

From these analyses it will be seen that the shells of the clam contain a much larger percentage of phosphates, magnesia, potassa and soda, than those of the oyster; while the latter are much the richest in lime and sulphuric acid.

Yours truly,

J. H. SALISBURY, State Chemist.

Old State Hall, Albany, Feb. 14, 1853.

—Plough, Loom and Anvil.

LEGISLATIVE AGRICULTURAL MEETINGS.

ELFTH MEETING—TUESDAY EVENING, APRIL 5, 1853.

The eleventh meeting of the series was held at the State House, on Tuesday evening. The subject under consideration was "*The Structure and Position of Farm Buildings.*"

Mr. PROCTOR, of Danvers, presided, and, on opening the discussion remarked that in his opinion, the cost of farm buildings should be proportionate to the value of the farm; that is, they should not cost more than the land, but as much less as possible. On a farm worth \$5000, the house should not cost more than \$2500. The buildings should be so situated as to save travel and power in farming operations, as on uneven land, the necessity of transporting manure up hill, as this is generally the heaviest labor on a farm. It would be much easier to draw produce up hill than manure.

The barns and sheds should also be so arranged as to afford the most comfort and convenience to the animals occupying them. Much suffering and loss occurs from a neglect of this matter. Farmers should avoid building their houses too high, because if constructed with three or four stories, the upper stories are inconvenient to get at. Whoever builds in this manner, errs in taste and misapplies his money.

Farm buildings, too, should be adapted to the purposes for which the farm is designed—as, if a dairy farm, or a cheese farm, rooms should be built expressly to meet the requirements of such farming.

Mr. PROCTOR thought the habit of keeping cattle in the barn during the entire winter, was un-

necessary; because, if sheds and yards are properly constructed, young cattle, certainly, can be well kept in them.

Mr. BROWN, of the *N. E. Farmer*, said that one great difficulty in arranging our farms and buildings is, that most of them come to us either by inheritance or purchase, and alterations in them are expensive. If he were to lay out a farm, he would form it into an oblong square, and if the lands were extensive, he would place the buildings somewhere near the centre—if not very ample, near the front centre, and nearest the highway, to be used in connection with the farm. He agreed with the Chairman, in regard to the house on a farm, for he believed there was much truth in the old couplet,

"A little house and a great barn,
Is a sure sign of a good farm."

One of the most important apartments in a house, is the cellar; and yet, among farmers it is often more deficient than any other apartment. The cellar should be eight or nine feet high from the bottom to the floor of the house, and should be well painted and white-washed. It should be kept in such a manner as to keep it moist, so that the hoops on the barrels should not drop off, but not so moist as to cause the casks and bins to rot. Mr. BROWN stated that he had a stream of water running through his cellar nearly all the time, the springs flowing out from the hill side behind his house, being conducted through it.

He found that fruit would keep better in this cellar than in any other he had ever used; he had no doubt he could keep some kinds of apples in it two years, without withering or shrinking much. The casks are always in good condition if the cellar is cleaned out two or three times a year, as he intends to have it.

In regard to the structure of barns, Mr. BROWN thought that if any man would furnish a design for such a barn as thousands of our farmers are at the present moment in need of,—something neat, convenient and cheap—he would confer a great benefit. He instanced the farm of a gentleman in Westboro', which accommodated under one roof the carriages, the hay, and the implements, by which means the expense of constructing roofs for separate buildings is avoided. Then from the centre of this barn, is another for the cattle, the droppings of manure being thrown under this building,—leaving the cellar of the main barn sweet and clean for the reception of the crops of the farm throughout the year. He had endeavored to form one after the same fashion. There was one great inconvenience connected with it, however; the bays for hay were very wide and long, and it often required three persons to unload and stow it away, which is more labor than can be spared in the haying season.

Mr. SHELTON of Wilmington said he had never

seen a barn which exactly suited him, but the one described by Mr. BROWN accorded well with his views. He had built his barn with a cellar under it where he kept his hogs; but he did not like it because he thought the odors from the manure affected the hay injuriously. Cattle would not eat it so well. He would prefer to have a barn with a cellar separate for manure. In regard to unloading hay, if practicable, he would have one end of the barn so as to drive in over the beams. He would also have his barn large, so that when, as frequently happens, in case of showers, hay has to be housed before it is fairly cured, there might be room to complete the process before it is mowed away. As to the position of buildings, he would as a general thing have them in the centre of a farm but would not get into a hollow, because it is apt to keep the cellars too wet, and the manure in the spring is too wet also. Farmers are apt to get their cellars too low and their buildings too high.

Mr. CLARK of Waltham said the position and structure of farm buildings depended very much on circumstances as to expenses, points of the compass, &c. He thought that as lumber was becoming scarcer and dearer every year, our farmers would soon be obliged to resort to stone or some other material than wood for their buildings. He remarked that he had noticed this winter that his cattle preferred spring water to well water, although he considered the latter superior. Farmers should have an abundance of water, because if they drive their stock away from home they lose a good deal of manure as well as time.

Mr. BROOKS, of Princeton, said he had been opposed to barn cellars to keep manure in, for he believed they injured the hay and affected the health of the cattle. If we build barns tight enough to keep cattle warm, we retain the gases of manure when it is in a cellar under the barn, and they injure the cattle and the hay: therefore he would build a barn entirely separate for hay, and then build a leanto one story high for cattle; and then back of that dig a cellar—or, if the land was not convenient, build a shed for the manure.

Mr. BROWN said he believed that manure under the hay and under cattle was injurious. As an illustration, he related the case of a friend of his, who built a barn which he thought he got completely fixed in every respect, and digging a cellar under it. He purchased a good deal of manure and brought his lands into a high state of fertility, producing large crops of hay, some of which grew quite rank. This he allowed to accumulate in his barn. He finally sold his stock to be pressed into bundle hay. Some of it had lain in the bay for three years, and when it was removed to be screwed down, it was so offensive two or three feet from the floor, that the men employed to press it were unable to endure it, although the barn was entire-

ly open, and a thorough ventilation was secured; and they were obliged to throw away portions of it.

Mr. BROWN remarked further, that it was difficult to arrange barns so as to have the cattle entirely separate from the hay. We must wait until we can build anew. We cannot afford the expense of changing the barns we now have. He would suggest as a remedy in part to strew the floor of the leanto every morning, or whenever the cattle are cleaned, with ground plaster. It will very speedily absorb the gases, and thus prevent the odors arising from the manure. But the thing of great importance, is to cover the manures, once a day with the great absorbent, peat-mud.

The suggestion of Mr. CLARK in regard to the use of stone as a building material by farmers, Mr. BROWN regarded as very important on account of the constantly increasing value of lumber. In his opinion we must have some thing to take the place of it. All over New England there are found stones that will split easily, and there are also slate stones that will make very fine building material. He desired that farmers should give the matter earnest consideration, and ascertain whether we cannot build as cheaply with stone as with wood. Stone buildings may cost the most at the outset, but once built, there is little to be done to them for a long time afterward, while on wooden buildings there is a constant expenditure for painting and repairing.

Mr. CLARK said he would make one suggestion in relation to the construction of horse stalls. He did not believe that horses ought to stand on plank floors. His horses stand upon the ground summer and winter—or rather upon a slight pavement, the bottom of the stable being paved with small stones, underneath which is a hard pan. He could not discover that he lost any liquid manure by this method. Standing on plank floors he thought injured the horses' feet and produced disease.

Mr. BROOKS did not consider the remedy for obviating the effects of the noxious gases of manure, viz. plaster, suggested by Mr. BROWN, as entirely sufficient for that purpose, because these gases are continually rising, and therefore plaster occasionally thrown down cannot effectually suppress them. He certainly would have no manure underneath the hay. In reply to inquiry, he remarked that he did not suppose any injury would accrue where one side of the cellar was left open; but in such case the barn could not be warm enough for the cattle. Still he had known of old-fashioned farms where this was the case, and the cattle were healthy; but it undoubtedly took more to feed them. The idea is to keep cattle sufficiently warm. They eat three per cent. of their live weight per day. If they are kept cold, they will eat more, and if very warm, less. Mr. BROOKS considered a warmth of 55 degrees as

about the right temperature. He believed it would be a gain to keep a fire in a barn in order to bring the temperature up to this point.

Mr. BROOKS attributed the preference shown by cattle for spring water over well water, to the greater warmth of the spring water. He had found by experiment that cattle prefer water from which the "chill" has been taken off. If he were going to build a barn according to his ideas of perfection, he would have an apparatus for heating water—he believed it would pay.

Mr. SHELDON said he had a barn with the cellar open on the south side, but the hay will injure on the north side. He coincided with Mr. CLARK in regard to plank floors for cattle. He had had more experience with oxen than with horses, and some years since, when he kept a large number, he used to spread meadow hay, which was then very cheap, under them, for them to stand on; and he would as readily have oxen thus kept, travel 18 miles a day, as to allow those kept on a plank floor to travel 15.

Mr. EMERSON, of Boston, thought barns should be placed on the northern or northeastern side of the dwelling, because the unpleasant and noxious vapors arising from manures, which are readily carried off by the dense atmosphere and strong winds of winter, are too heavy to be forced upwards by the lighter air and currents of summer, and hence, if the barns are located on the north side, will become very annoying during the warm months, as the southerly currents will waft them directly upon the house. The barn-yard, also, should not lie between the house and the barn, but be fixed beyond the barn, in order to avoid passing through the yard in going to the barn. It would also tend to prevent annoyance from noxious vapors in summer.

For the New England Farmer.

PLASTERED HOUSES.

MR. BROWN:—I noticed in the last No. of the last Vol. of the *Farmer*, an article inquiring "if the outside" of a house "could be plastered or finished with concrete or hydraulic cement, and then painted and penciled in imitation of granite, so as to be durable?"

Mr. Camp can plaster with common lime mortar, leaving it rough, or as the leveller leaves it, until well dried, then a coating of plaster paris can be applied, and when dry it can be painted to suit his taste. The plaster paris will cost about twelve and a half cents per square yard, including material and labor of putting it on, and forms a perfectly hard, smooth surface.

I have been looking for an answer which would be of use to me, as well as Mr. Camp.

As the season for repairing and building is at hand, cannot some one give some useful and practical hints in regard to the subject? Surely, there is a broad uncultivated field here, which ought to be occupied immediately.

ARTESAN.

For the New England Farmer.

OBSERVATIONS ON SPRING WORK.

BY F. HOLBROOK.

The Spring of the year is a busy and hurrying time with farmers, and yet there are some operations of tillage which they can ill-afford to execute in a slight and superficial manner. It would be impossible in a communication of reasonable length to speak of all the methods of culture pertaining to this season; and only a portion of the more important of field-operations will be noticed at this time. Observation would rather induce the remark, that the preparation of the ground in the Spring, for the reception of seeds, is not generally as thorough as it should be. A more particular and finished style of plowing, for instance, would undoubtedly well reward any extra labor involved, by the extra amount of product of crops it would ensure. The furrows are generally too wide, shallow, imperfectly turned and matched, the crops are lessened by the means, while the labor and expense of the after-cultivation is increased. Then, again, it is too common to plow the different soils in the same style, while they require variations as themselves vary. The style of plowing a stiff, compact clay, should be different from that of a dry, loose, porous, sandy or gravelly soil.

The best way of plowing a stiff clay, consists in cutting very narrow furrow-slices in proportion to their depth, and setting them over as nearly as may be, to an inclination of 45°, thus making high-crested lapped work. To do this the most surely, the depth of the plowing should equal about two-thirds its width,—say as 7 inches deep by 10 inches wide, or 8 by 12, or 9 by 13 to 14 inches. When the earth is turned over in slices of these proportions, the plow in the act of turning them, can finely crack and disintegrate them; then they are set up so lightly, and so lightly rest against each other, that the atmosphere can circulate among them, the rains pass through them, their projecting angles or exposed faces present the greatest attainable surface to the atmosphere, and the greatest contents of soil to the operations of the harrow, so that it can the better slacken and break down the stiffness of the soil, combing out its too compact constituent parts into fine particles, and raising a deep mellow seed-bed.

With a view of satisfying myself of the advantages or otherwise of lapped over flat plowing of stiff soil, I last year selected an acre of formerly wet, and naturally heavy tenacious pasture-land, that had never been plowed, and plowed half of it in 7 by 10 lapped furrows, and half in 7 by 12 flat furrows,—both kinds being done in a particular and finished style. The land was moderately manured, and planted with potatoes. In the operation of harrowing, it was found that the surface of the lapped furrows soonest yielded a fine tilth, and gave the deepest seed-bed. The hoeing upon the lapped work was the mellowest, and the horse, in passing between the rows on this half with the cultivator at hoeing-time, would frequently sink down fetlock deep between the furrows. A greater luxuriance of vines on the lapped than on the flat furrows, as also a superiority in the size of the potatoes, and in yield of crop, was quite apparent; and the hand-cultivation was performed with greater ease and expedition.

But dry, sandy and gravelly lands, being already

too loose and porous, are best plowed in perfectly flat furrow-aliases, the edges closely matched in, and the plowed land lying smooth and firm; and if a heavy roller is passed over it, closely pressing the furrows down and together, it is generally all the better for the succeeding crop,—more particularly if a dry season follows. I have had much to do with very light, dry, sandy and gravelly lands, and have succeeded best by one thorough sod-plowing, as deep as circumstances would warrant, turning the sod over perfectly flat, then pressing the plowed lands down with a heavy roller, then raising a tilth two to three inches deep with a light, fine-toothed harrow, planting one year, the next year plowing quite shallow and seeding to grass with grain, and leaving the turf undisturbed beneath. I have frequently observed that the new seeding gained a thicker and better stand after this mode of cultivation, than when the turf was brought again to the surface at seeding time, and there left to dry and become dissipated by sun and wind.

The soils of medium texture between the extra stiff and the loose and porous, are perhaps generally as well plowed in flat furrows, as any way,—only let the aliases be as narrow in proportion to depth, as will do, and turn over handsomely, because the soil turned over in narrow aliases, is more surely and readily disintegrated and broken into particles. The sod and subsoil plow appears to be quite well adapted to the working of these soils, where the land is not too rough or too much encumbered with obstructions. It is sometimes claimed, indeed, that this kind of plow is best adapted to every soil; but the claim is perhaps rather broad, and possibly it might be as well to leave a slight margin for the present, at least.

In plowing stubble or old land, it is well to use a plow of shorter mould-board, more abrupt in curvature than that of a first-class sod or breaking-up plow, so as to give the furrow-aliases that short twist in turning them, which shall break and separate the soil into particles, mixing it up and leaving it a mellow bed for grain and grass seeds.

Pretty nearly all soils here in New England, are rather too shallow, and may be safely and profitably deepened by a gradual process, ultimately attaining a depth of surface-soil of eight or nine inches, of uniformly good fertile quality. I have tried the process, and know that it will not *spile* the land. The advantages of a deep, over what can be realized from a shallow soil, are too apparent to need comment.

In harrowing land for a crop in the spring, the operation is too commonly executed in a careless and superficial style, notwithstanding that such style cannot well be afforded. The crop, of whatever kind, will start the quicker and be the more forward and vigorous, if the seed-bed has been made deep, fine and mellow; and if a planted crop, the planting and first hoeing will be enough better and quicker executed to more than three times pay for the extra time and labor spent in thorough harrowing. Great improvements have been made in the construction of harrows, and it is quite singular to me that the coarse, unsmooth implements of former days, should now be used, when those so very much more effective, are so readily procured. Some of the best-constructed, modern hinge-harrows are adapted in their operation to the surface of the ground in all places, and whether

or going through little sharp hollows, or over stones, knobs or ridges, they always hug the ground closely, and produce a fine, equal pulverization in less time than is consumed in mangling and bruising the ground with the old, clumsy, coarse-toothed, ill-constructed harrow. In another communication, I will give a drawing and description of a hinge-harrow which I use and think a good one, and which every farmer can readily make, or get made in his neighborhood.

Manure to be applied to sod-land plowed for a crop in the Spring, if fine compost, generally produces the best results when spread on the surface of the furrows, and mingled with the soil to the depth of two to four inches. An ordinary coat can be suitably mixed with the soil by the harrow; and if a very heavy coat is to be applied, the sod-plowing may be of good depth, so that the manure when spread on top may first be harrowed in, and then turned down and mixed with the soil to the depth of three or four inches by a light plow.

If coarse, unfermented manure is to be used, and the sod-plowing is to be no deeper than that which generally prevails, then the manure may as well be spread on the grass and turned beneath the furrow, spreading it not much ahead of the plowing; but if the plowing is to be extra deep, the manure may as well be spread on the surface of the plowed land after it is harrowed, and then buried four inches or so, with a plow gauged and regulated by a wheel on the beam. Any kind of manure, in any state, if to be applied to stubble or old land, had better be plowed in, for it is the nature of stubble plowing to turn no part of the crumbling furrow-slice exclusively to the bottom of the channel, but rather to mix up the various parts all the way from bottom to top, so that the manure will be found, on inspection, to be well mixed with the soil, and not buried too deep.

My friend, J. W. Colburn, Esq., of Springfield, Windsor Co., Vt., one of the best farmers we have in Vermont, informs me that his practice is to use coarse, unfermented manure, spreading it upon the grass land to be plowed in the Spring, and turning it under with a 'sod-furrow six inches deep; he then plants the land with corn; and the next year plows it ten inches deep and seeds with spring grain and grass seeds. He has often commended the practice to me as attended with satisfactory results; and has frequently taken the premiums of the Windsor County Agricultural Society for fine crops.

The earlier Spring sowing can be done after the ground is fit to be worked, the better will it generally be for both the grain and young grass. It is customary with some to sow grass seeds with grain in the spring, and with others to omit the grass seeding at that time, and plowing the grain stubble under after harvest, seed with grass in August or September. I have practised both modes, sometimes succeeding best with the Spring, and sometimes with the late summer seeding. If the fore part of the season is pretty moist, the latter part is often apt to be dry; and in that case Spring seeding will be likely to succeed best: on the other hand, if the fore part of the season is prevalently dry, it is often followed by a moist autumn; and then the late seeding succeeds best. As we cannot anticipate the character of the season with much certainty, I have rather fallen into the practice of sowing grass seeds with grain in the Spring,

and if a good catch is not obtained, the land is at once plowed again after grain-harvest and reseeded with grass only. A failure in having one's new-stocked mowings well set with grass, is a great disappointment and vexation, and the best relief is found in plowing and reseeding again the first fit opportunity. These remarks upon laying land down to grass have exclusive reference to stubble land, and not to the plowing and reseeding of mowings after haying, for the purpose of renewing them.

Oats are a hardy crop for one's own feeding purposes, command a good and ready cash price in market, and therefore are quite generally sown; but if the land is to be stocked to grass at the same time, and a good catch is to be principally considered, they are not as good a crop to sow as barley. If they grow stout, they shade and choke the young grass too much; and if they lodge they fall flat upon the ground, smothering and killing the grass; but barley gives the grass a better chance for growth, and if it lodges, it rather crinkles or doubles over than falls flat, so that the young grass maintains a stand in the soil. I have sometimes been led to observe quite a superiority in my first hay-crop after seeding with barley over that after oats; and the result may probably be attributed to the fact that the young grass got better foothold so as to more completely occupy the soil in the former than in the latter case.

I have found peas and oats a valuable crop, particularly for early autumnal feeding of fattening swine, and generally for any stock at any time. I usually sow one and one-half bushel of peas, and two bushels of oats to the acre, which makes about the right mixture of straw to stand up pretty well while growing, and of grain for feeding. Some of my crops from this seeding have been very luxuriant and profitable. Year before last, I obtained 57 bushels of grain and a great quantity of straw from a little less than one acre, and considered it the most profitable grain-crop raised that year, from that quantity of land. If the crop of peas and oats is very stout, it cannot be cradled, and must therefore either be cut with the sickle or scythe. I prefer reaping to mowing, because the crop is easier cured, handled in carting, and threshed, and takes less barn-room. It would not be advisable to sow grass-seed with peas and oats, for the latter are too smothering to the young grass; but the stubble may be plowed in and the grass-seed sown in the fall.

In stocking land to grass, the seed should be strown broadcast with a liberal hand. There is no economy at all, in *sprinkling* it over the ground. If sown bountifully, foul stuff will be shut out, the quality of the hay will be fine, the sward will be thick and firm, and when plowed under for the next rotation, will return a heavy coat of vegetable matter in its roots and stems to the soil, enriching it, and nourishing the succeeding crops.

The more general sowing of white clover-seed is confidently recommended. If land is in good heart at the time of stocking it to grass, white clover sown with the other grass-seeds will thicken up the bottom of mowings, growing some eight or ten inches high and in a thick mat, and the burden of hay will prove much heavier than it seemed likely to be before mowing. Soon after the practice of sowing white clover on the tillage-fields commences, the plant will begin to show itself in various places on the farm, and ultimately gets pretty well seat-

tered over the pastures, as it seeds very profusely, and the seeds are carried from place to place in the manure and otherwise. The price of the seed per pound in market is high; but then one pound of it will seed more land, than two pounds of red clover seed; so that in fact the former is the cheaper seed of the two, for an acre.

Red-top, red clover and white clover seeds, sown together, produce a quality of hay universally relished by stock. My practice is, to seed all dry sandy and gravelly lands with this mixture. The red and white clover pretty much make the crop the first year; the second year, the red clover begins to disappear, and the red-top to take its place; and after that, the red-top and white clover have full possession and make the very best hay for horses or oxen, milch cows or young stock, that I have been able to produce. The crop per acre, as compared with herds-grass, is not so bulky; but tested by weight and by spending quality in the winter, it is much the most valuable.

Herds-grass hay grown on moist uplands or reclaimed meadows, and swamps of a mucky soil, or lands not over-charged with silica, is of good quality; but when grown on sandy and gravelly soils abounding in silex, the stalks are hard, wiry, coated with silicates as with glass, and neither horses or cattle will eat it as well, or thrive as well on it as on hay made of red-top and clover; and as for milch cows, they winter badly on it, and do not give out the milk as when fed on softer and more succulent hay. Still, it is a valuable grass for hay on other kinds of soil; particularly valuable for stocking down reclaimed peat meadows, and swamps of mucky soil; for these lands are generally more or less deficient in those matters which give strength of stem to the crop; and herds-grass while by its disposition to attain a stiff stem, thrives and stands up straight on such land, till harvest, yet makes succulent and nutritive hay, because it cannot appropriate a redundancy of silicious matter as in the other soils alluded to. For similar reasons it makes good hay on all soils not over abounding in silica.

I intended at the commencement of these observations, to say something upon planted crops and upon root crops; but as my remarks have already attained too great length, I will bring them to a close with one observation upon planting corn, namely; when planted on dry, loose, land, it is best to cover the seed from two to three inches deep, so that if very dry weather succeeds immediately after planting, the germination may proceed, and the young sprout not become withered by heat and drought; and indeed on all land suitable for corn, it is generally safest, one year with another, to cover the seed pretty well in planting, so that if a frost succeeds after the corn is up, the vitality of the plant may be preserved by the extra covering of earth. If planted quite shallow, the crop is liable to fail, both from drought and frost.

F. H.

Brattleboro', Vt. April 2, 1853.

TO CURE SHEEP SKIN WITH THE WOOL ON.—Take one spoonful of alum and two of saltpetre; pulverize and mix well together, then sprinkle the powder on the flesh side of the skin, and lay the two flesh sides together, leaving the wool outside. Then fold up the skins as tight as you can, and hang them in a dry place. In two or three days,

as soon as they are dry, take them down and scrape them with a blunt knife till clean and supple. This completes the process, and makes a most excellent saddle cover. Other skins which you desire to cure with the fur on, may be treated in the same way.

We can speak in favor of the above receipt. It does all it promises. Such skins make excellent mats for indoors.—*Detroit Farmer's Companion*.

ORNAMENTAL AND SHADE TREES.

It is a marked peculiarity of the native population of Massachusetts, those especially whose ancestors have been indigenous to the soil for two or three generations, that they exhibit a very close conformity in habits, customs, manners, ways of business, ways of thinking, and general views.

This conformity of thought and action has originated an apt phrase to designate it in the expression, "a Boston notion." This peculiarity is, perhaps, as manifest and striking in our farmers, as in any other part of our population. One follows another, neighbor imitates neighbor, and son continues the practices of the father, without inquiring into the reasonableness or advantage of the practice, or if he inquires, it is generally to sustain himself in his course by the authority of his progenitors, or that of some distinguished living man, more often than by the force of unprejudiced argument or impressive fact. There is a great uniformity in the crops raised, and in the mode of cultivation, though the discrepancies in the statements and opinions of farmers would often lead one to opposite conclusions. This disposition is carried out in the planting of shade and ornamental trees, and the general mode of adorning the "front yard."

The house is generally placed at from ten to sixty feet from the dusty road, as if there were not room on the premises for the family edifice; and if the proprietor concludes to go into any extravagance beyond the paint pot, two or four trees are selected, which are almost always of one species, to secure uniformity, and planted in a mechanically straight line for the same object. Formerly the favorite tree selected for this purpose was the Lombardy Poplar, the most unsightly of all the trees, and odious for the armies of innumerable hairy caterpillars, whose favorite resort it was. Here and there stands one now, straight as a mackerel, reminding us of the female costume in the pictures, before moreen petticoats were in vogue, and when cotton was too costly to set off the "human form divine," in new humps and graces. Previous to the day of the poplar, the elm had generally been the chosen tree, and that has again succeeded to favor since the poplar has fallen into merited disrepute. The elm is certainly a beautiful and majestic tree. In these attributes it is not surpassed. It is not in good taste, however, to observe the rule of uniformity by using

only one species. Several should be used, different species intermingled, and set in disorder, not in linear order. If, however, one species were to be the sole ornament to a rural house, there are trees which have claims quite equal to the elm. The pine is a tree not surpassed in beauty, has the advantage of continuing through the year in foliage, and has the most agreeable and wholesome quality of drying the atmosphere where it stands, and of giving out a delicious fragrance. Other evergreens, the fir, spruce and larch, are beautiful trees. The walnuts, the chestnut, the scaly-bark, hickory, in addition to the recommendations of being handsome trees, yield pleasant fruit. The wild cherry, also, does the same.

Some of the oaks, the beech, the fragrant birch, called the black-birch, the ash, a stately and beautiful tree, and for a pleasing variety the holly and red cedar, the locust, red maple, linden, and others, are all worthy to do their part in adorning the farmer's ground, and are capable of giving a higher degree of ornament than the most finished and elegant architecture,—and that without much cost.

For the New England Farmer.

MORE ABOUT POTATOES.

By a notice on page 48 of the current volume of the *N. E. Farmer*, it appears that T. D. Merison, of Hill, N. H., claims to have discovered a *certain remedy* for the potato rot; at least one may readily suppose that friend M. considers it an infallible remedy, from the fact that he has presented his claim for the "\$10,000." Now I do not wish to infringe upon his rights, or upon those of any other individual, but I will inform him that his theory has been in vogue several years, and with a view to test its correctness, I tried some experiments last year,—the result of which I offer for the benefit of others.

I planted a piece of ground with potatoes, on the *north side* of a shed, and on about half of the piece I planted two or three kernels of corn in a hill. In my corn-field I planted a bushel or more of potatoes, a few hills in a place, so that the potatoes were pretty well shaded. A part of the same piece was wholly planted with potatoes. On a third piece I planted potatoes at the north side of a wood lot. None of my potatoes rotted badly. Those near the shed, and in the hills in which corn was planted, showed quite as strong symptoms of infection as those in the hills where no corn was planted. So with those in the corn-field; some hills had but few *sound* tubers in them, while in others there were but few *decayed* ones. But very little, if any difference was observable between the potatoes growing *amongst* the corn, and those growing *outside* of it. The third piece gave similar results. Only a few infected tubers were found, but those growing nearest the woods were not entirely exempt. Nearly all my potatoes grew on light, sandy loam. Now I think I have given the *shade theory* one fair trial, and as it did not entirely prevent the disease for which it is recommended, I shall enter my protest against the payment of the premium *until after another trial*. I

hope farmers will not accept any theory, without practical proof. If, by experiments carefully made, it is found that *sheds, board fences, or corn-stalks*, are a sure preventive, then, if the originator of the theory can be found, let him receive the reward. Patent medicines are apt to yield a good profit to the inventor, but I do not believe any one yet proposed for the cure of "this vegetable cholera" will greatly replenish the pockets of him who offers it in market.

Prof. Hoyt, in his able essay upon the "Potato Rot," recommends mowing the tops close to the ground. In 1848 I had a small piece of potatoes in which the blight began to appear. I took a scythe and mowed the tops on a part of the piece, having heard that that would arrest the disease. The result was, that every potato, I think, in the hills from which the tops were cut, was entirely rotten, while on the remainder of the lot a considerable portion were sound. Hence it appears that similar experiments produce different results in different locations,—positive evidence that the true remedy is not yet found.

LEVI VARNEY.

Sandwich, N. H.

LEGISLATIVE AGRICULTURAL MEETINGS.

TWELFTH MEETING—TUESDAY EVENING, APRIL 12, 1853.

The twelfth and concluding meeting for this year was held at the State House on Tuesday evening, His Excellency Governor CLIFFORD presiding.

Mr. PROCTOR, of Danvers, previous to the opening of the discussion for the evening, submitted a motion to the effect, that the Secretary of the Board of Agriculture be requested to call a meeting of the friends of agriculture, at the commencement of the next Legislative session, for the purpose of organizing such a series of meetings as will be best calculated to advance the cause of agriculture. The motion was unanimously adopted.

The subject for the evening's discussion was then taken up, viz: "The obligation of the State to afford additional encouragement to the farming interest, and the best means of doing this."

Governor CLIFFORD, in opening the discussion, remarked that he could not, with any consistency, or with any deference to his own interest in the subject of agriculture, have failed to respond to the invitation extended to him to preside at this meeting. He felt, however, that his position was that of a listener and a learner, rather than a teacher. Yet no one could doubt that the subject would almost spontaneously give rise to some of the best thoughts in the minds of those who are interested in the prosperity of the people of this commonwealth.

The Legislature, within the last year or two, have manifested, what the people too have begun to feel, a new interest in the subject of agriculture, and the establishment of the Board of Agriculture is an indication that that interest has begun to put on the form of active, intelligent and efficient effort for the promotion of that great cause. That

it shall be intelligent, is, after all, the great object to be gained. There can be no indisposition in those who meet here in discharge of public duties, to do everything in their power to promote the cause of agriculture; the point is, that they shall have a clear understanding of what may conduce to that end. With an intelligent Board of Agriculture, there will be brought before the Legislature and the people of the commonwealth, such information as will leave no hesitation on the part of the Legislature in carrying proper measures into effect. The speaker thought the selection of a Secretary to the Board had been fortunate, and spoke very highly of that gentleman's qualifications for the office.

How far it was practical for the government to give direct aid to agriculture, or to any other department of industry, was a question of such a broad nature, involving so many considerations that are not perceptible to a cursory examination, that he would not enter upon a discussion of it. But there is no doubt that whatever government can do to foster and stimulate the education of the farmer, is within the legitimate scope of her duty.

There seems to have been among men an idea that there were two classes of minds in the world who draw all their powers of usefulness directly from nature—these were the farmers and the statesmen, two classes of persons whose ultimate objects are, or should be, the same, to scatter plenty over the smiling land. To accomplish this, there seems to have been an idea that every man has been born into the world full-armed,—that he does not require special education to be a farmer or a statesman. Almost every one of us feels competent to solve the most knotty questions of public policy, and in our popular assemblies, measures which reach in their results far into the future and puzzle our wisest statesmen, are discussed and decided in the most flippant manner.

So with farming. What other occupation to which the energies of man are devoted, is deemed to be sufficiently answered in its preparation by the education which has heretofore been given to our farmers? If a man were intending to make a lawyer of his son, he would put him through a regular course of study. But what is there analogous to this, in the education of our agricultural population? Is there anything like a systematic education for the farmer? Does not the possession of unusual intelligence and enterprise lead a young man to leave his father's farm, as being better fitted for some other profession? Gov. CLIFFORD thought he could see in the future a state of things where the education of a farmer's boy to a farmer's pursuit may be made so attractive to him as that he shall have no temptation to leave that noblest of all occupations which the Almighty has given to his creatures. His intellectual nature will be satisfied in the studies

which belong to the scientific and truly intelligent agriculturist. Why should it not be? Why should it be taken for granted, because a young man exhibits signs of remarkable talent, that he cannot live a farmer? All professions look to this pursuit for their final reward. As soon as men in other callings obtain a competency, their thoughts turn towards retiring upon a farm. This shows that the cultivation of the earth is congenial with the natural tastes of man.

The remedy for this desertion of farming by the young men, is to educate them for the practice of farming, as other men are educated for their pursuits; and it is too late in the day to say that if you give them the taste for higher departments of thought and of action, it will create a distaste for muscular labor. How this education shall be carried out, His Excellency thought would be wisely answered by the Board of Agriculture. He believed it to be one of its most important duties to give an answer to this question, and once answered, he believed the government of Massachusetts, in whosever hands it might be, would not fail to second the accomplishment of such an object. What the State will do, will depend very much upon the manner in which the Board of Agriculture shall discharge its duties.

Mr. PROCTOR, of Danvers, expressed his gratification at the views of His Excellency. He thought there was much difficulty connected with the question of "How shall the farmer be educated for his calling?" He would suggest that something might be done through the medium of the county Agricultural Societies of the Commonwealth. Places are needed for the trial of experiments in farming, because farming in books without experience amounts to nothing. You may read and philosophize to the end of time, but if you do not plant and watch vegetation, science is good for nothing. Each of these county societies has a fund, raised by assessments on its members, and by subscriptions, and if that fund amounts to the sum of \$3000, the State gives 20 per cent. on that amount to the society, which is \$600 per annum. He thought a part of this fund might be advantageously invested by the societies in model or experimental farms, which might be made to yield a good interest and at the same time afford excellent facilities for the instruction and improvement of the farmers of the Commonwealth. These farms he would have under the management of the different societies, subject to an annual visit from the Secretary of the Board of Agriculture. Let them be required to furnish annual reports to the Board, and let the different records thus obtained be brought together and compared, and conclusions deduced therefrom. He thought it would be well for the State to see that these funds were appropriated in this manner, and specific donations made on the recommendation of the Board.

Mr. SPRAGUE, of Duxbury, alluded to the necessity for definite information among farmers. It is highly important to establish principles in agriculture. In making experiments some farmers succeed, while others do not, but the reasons of the success and of the failure are alike unknown to them. If by establishing a Board of Agriculture great leading principles can be definitely fixed, the work is begun, and the end is certain.

Mr. WALKER, of North Brookfield, considered an experimented farm in an agricultural community to be a matter of economy, as experiments can be made more accurately and are therefore more reliable. He also forcibly urged the establishment of farmers' institutes as a most important means of diffusing sound agricultural information.

Mr. WRIGHT, Secretary of the Commonwealth, made some interesting remarks in relation to the improvements which have been made during the last ten or fifteen years in farms and farming implements, and eloquently set forth the advantages of furnishing the farmer with a thorough, practical education.

Mr. FLINT, Secretary of the Board of Agriculture, alluded to a remark made by the distinguished Professor JOHNSON of Scotland, in one of his works, that New England was eighty or ninety years behind Scotland and England in farming, and that they could and would maintain this superiority. He thought the Professor might not have taken into consideration all the circumstances. In his country all the land is owned by 33,000 persons, noblemen, gentlemen, lawyers, and the like, and of the three millions of laborers not one owned a rod of soil. These 33,000 proprietors can command the most eminent talent in agricultural knowledge, while the American farmer has not the necessary means. With us the desideratum is to perform the greatest amount of labor with the smallest amount of capital. But while we have something to learn of European agriculturists, perhaps they have something to learn of us.

Mr. Flint thought the agricultural interest should be the leading object of public regard, and he believed that if farmers gave expression to their wants they would be met. The only way to recruit the energies of our exhausted lands, is to increase the diffusion of agricultural knowledge. He stated that the State had dispensed \$10,000 during the past year to the county agricultural societies, and he was not sure but this was the best method.

Mr. BROOKS, of Princeton, said that model farms might answer very well for certain purposes, as experimenting on the best food for stock, &c., but they are not good for determining all farming operations, because the soils of different farms and the soils on a single farm vary so much, that the experiments would not always be safe guides. His idea would be to have an experimental farm under

the control of the Board of Agriculture, where experiments in feeding stock might be made. On the farm he would have a chemist, paid by the State, who should furnish farmers throughout the State with analyses of soils, on condition that they should experiment on their own farms. By this means experiments will be obtained all over the State, and in much greater number than in any other way. The farmer, too, would collect his facts on his own farm, and from his own experience. If any of these experiments failed, they would be explained and corrected by the Secretary, who could afterwards collect and publish the results thereof.

Mr. BROWN, of the *N. E. Farmer*, considered the inquiry, what shall the State do, an important question to be answered; and he had an opinion in relation to what the State might do, and that with great advantage. The State may establish somewhere in the Commonwealth an experimental farm—which may be the poorest land to be found anywhere—at a small expense, and cultivate it in such a manner as in the end to incur no expense whatever to the commonwealth; the income of the farm itself, and increased value of the land which it might eventually spare, repaying every dollar invested in such a purchase. He agreed with the gentleman from Princeton that such a farm would not be a criterion for the whole State, but it might be of great benefit in some respects, and particularly such as the kind of stock to be reared, and the manner of feeding it—a subject of great importance, and of which very little is known. Although he had had many years experience in feeding stock, he still felt ignorant of the true principles to be adopted, and was not confident that he was pursuing the best plan. There are a great many other experiments which might be made on such a farm.

Another thing he would have the State do, was, to make an impression on the general government. He would not ask, at present, for the establishment of a department or bureau, at great expense, with its head as a cabinet cabinet officer, and a corps of clerks, but he would have our charges, consuls, naval officers, and all scientific persons paid by the government, instructed to make researches into the state and practice of agriculture in the countries they visit; to collect seeds and plants of every description which might be considered useful here, and return them to the government, together with such reports as their opportunity and ability had enabled to draw them out. These collections could be referred to the proper officer, and make a part of the annual agricultural publication issued by the government, or referred to such of the state societies as would engage to prepare and publish the reports, or experiment with the seeds and plants.

Mr. BROWN said it had been remarked that

"the good time" was coming for the farmer, but he declared that the glorious day had already come, for the great point in securing his prosperity was to soften his prejudices and gain his good will; he believed that time had arrived. We have gained the public ear, and people are willing to listen and read. Scientific effort had been looked upon with distrust; the term science has been made a gorgon's head to frighten people from experiments and books; but the partition wall is now broken down, and when the dust and rubbish is cleared away, we shall go on in the clear light of rational progress.

The hour of nine having arrived, Governor CLIFFORD brought the discussion to a close, with a few remarks, in the course of which he expressed his pleasure at the remarks of Mr. BROWN in regard to the breeding and feeding of stock, that he was not satisfied with what knowledge he had in the matter. We should adhere to that idea, and not be satisfied with present attainments. In this we have the best assurance of future improvement. These discussions are sufficient evidence that the course of agriculture is in good hands.

At a few minutes past nine o'clock the meeting adjourned, *sine die*.

For the New England Farmer.

SHOVELDOM.

MR. EDITOR:—Enclosed you will find a most interesting article from the *Christian Register*, on "Shoveldom." Everybody who ever used a shovel in America, must have known something of O. Ames & Sons' shovels Easton, Mass. This tells (after the manner of Dickens' Household Words, in describing the manufacture of nails or tacks and other articles) how they are made. Being a native of the adjoining town, I have always understood from my youth up, the cause of the great reason of the success of the Messrs. Ames to be, that "whatever they thought worth doing at all, was worth doing well." Here is a practical and ocular demonstration of the capital working of such a motive power and principle. Many hard days of shovelling has the very hand which traces these words done with Ames' shovels. But considerably more than half of my life has since been spent in Boston, endeavoring to shovel up dollars and cents, and in all my experience, I can truly say, that if the instruments of my work were as perfect as that article, and if the motive power or motto above had been more strictly adhered to, my success would have been greater. W. R. B.

"Pardon a brief descent to details, gentle reader, and imagine yourself holding in your hand a brand new "Ames's Cast Steel Shovel," to serve for a text. Do you know that useful tool is the result, by virtue of a wise division of labor, aided by apt machinery, of some forty different processes, not including the make of the handle, which came with millions like it, from Maine, where trees are plenty! Such is the veritable fact. Space will not allow of minute description; but a few items will furnish convincing proof.

In the first place by a knife of irresistible edge

as it obeys the irresistible force of the "water power," a plate of the right size is cut from a sheet of steel as if it were a sheet of silk before the scimitar of Saladin. Two more similar clips from two similar knives gives the right outline for the shovel. To remove the "black scale" the plate is ground on a grindstone; then it is punched for the rivets which are to hold the back and front straps to the blade; then, after having been heated, its surface is shaped by pressure between two dies with a weight of about 1200 pounds. Next comes the "setting" done by hand, to remove "wakes," straighten sides and correct twists. A vitriol bath to remove scales, and a vigorous polishing on wheels covered with emery, dismisses the plate for the present, and leaves us at liberty to prepare the "straps" needed to bind it to the handle. These are cut, rolled, sheared, pounded, levelled, shaped, annealed, polished, countersunk, &c., mostly by ingenious machinery, and then they are riveted to the front and back of the shovel, close as you see them, fitting like a glove that fits as a well behaved glove should.

We move on now to the handle shop. The two holes for rivets in the head of the handle are bored at once, by bits revolving two thousand times a minute. The "bending" to give the graceful curve and right balance for easy working, is an amusing operation. The lower end is boiled for an hour or two to take the obstinacy out of it and make it pliable. When it is soft enough to be docile and manageable, it is placed between two iron blocks, with the rightly undulating grooves and connected by a hinge, as a lemon is put into a squeezer; and then the blocks are brought together by a powerful pressure and fastened, and so the prisoner is kept encased until he grows cool and promises never again to straighten himself out. With this understanding he is released and put away for three weeks to dry, and get thoroughly seasoned for the laborious life before him. How the caps to the rivets and the rivets themselves are made, how the handle is inserted between the straps and screwed and wedged, how all rough edges are filed down, and wood and iron rendered agreeable to the hand,—how the plate is scoured and all metal parts of the tool burnished, and the shovel complete is made bright, clean and trig ready for inspection—we have neither time, room, nor descriptive power to tell. Suffice it to say that such facility and perfection has been attained in the manufacture of the respective parts, and such the number of persons employed, that on the average a shovel is made now in less time than it once took to bore the holes through the head of the handle. Experiment and ingenuity and industry have achieved this really marvellous result in this model establishment, whose name and fame are such, that it has not been able for years to fill all its orders or to supply the demand for its products. This success is greatly due to strict observance of these principles, viz: 1, that the labor shall be divided into as many distinct processes as possible; 2, that each man shall learn but one process, and learn that thoroughly; 3, that each workman shall be paid so much per doz., for his work—so if indolent he shall be the loser, and if industrious the gainer; 4, that the shovels shall be inspected at every stage of their manufacture, and when they are finished, in order to guard against poor work; and 5, that none but the very best materials shall be used.

Of the statistics, of "Shoveldom" it is enough to say—omitting all reference to its indirect effects,—that it uses each day 4 tons of iron and 2 tons of cast-steel,—it employs 250 men, paying them from 5 to \$6,000 per month in wages,—turns out more than 2000 shovels of various styles and prices per day,—and sold last year something like \$600,000 worth of its fabrics. In view of these figures were we not right in designating "Shoveldom" as a kingdom; and who will deny that its liberal-minded, intelligent and enterprising proprietors, have been and are, in the way of business, benefactors to the community, by furnishing employment to so many operatives, creating as it were a thriving town, and equipping armies for the peaceful physical conquests of the times? No one certainly who has visited their establishment.

WEALTH OF THE UNITED STATES.

The property, real and personal, in the United States, is estimated by the census at \$7,133,369,725. This will make an average of between \$300 and \$400 to each individual, or \$1,800 to each family. Upon this the *Providence Journal* remarks:

"Considering the great distribution of wealth in comparison with the accumulation of foreign wealth in few hands, this shows a degree of material prosperity which, we presume no other country can approach. The fourth of July talk about our being, 'as we ourselves have voted,' the freest and most enlightened nation on earth, is not an idle boast. It is literally and strictly true. No where else is there so much freedom; no where else is intelligence so generally diffused, although in many parts of the world, science and learning are carried to a far greater height; no where else are the physical comforts of life so widely distributed among all the people, and these comforts are the only sure foundation of moral and intellectual improvement.

"How deeply it concerns us to guard this great inheritance, and to transmit it as we have received it. Most of all can we do this by assuring the prosperity of the country in all the peaceful arts, in the development of its mighty resources and in all its means of contributing to human happiness and human advancement. We cannot do it by an insane desire for territorial aggrandizement, by unscrupulous means of extending our area, and by bad faith with the nations around us. Never was the course of power and greatness more plainly marked out to a people. It will be sinning against the light of Heaven if we fail to pursue it. Our punishment will be as well deserved as it will be signal and severe."

REMARKS.—We have no doubt that the statements made above are true, and the reflections on them are certainly just. And yet, amidst the abundance so liberally bestowed by Him who controls all things—amidst such fertile soils and congenial seasons, pouring into the lap of industry more than enough for all, if their products were more equally distributed, how many languish and suffer for want of employment and food, and a permanent home! With all our freedom, our excellent institutions, our safe and wholesome municip-

al arrangements, with all the efforts of the philanthropic and good, there is still suffering and sorrow all around us that ought not to exist. Our social organization is still extremely imperfect. There is immense loss and worse than waste, from the indulgence of morbid appetites, and constant and heavy expenditures for defence against criminal and foreign invasion of the public peace. How these evils are to be remedied, is a question demanding the earnest consideration of all. With those who are correct in their habits and who are industrious, there should be no suffering for want of food or shelter; and yet, this is the very class who suffer the most; who, having honor and position to lose, shrink from the rude gaze of the world, and suffer on in silence rather than ask charities which are too often grudgingly doled out. We express no new zeal on this subject, but speak of what we know to exist.

It is for the interest of all that all should possess permanent homes, be well fed and clothed and be happy. Let each strive to accomplish this for himself and his neighbor, and the world will soon present a new aspect.

For the New England Farmer.

PLASTER.

It is not unfrequently that we hear farmers extol the virtues of plaster in imparting a more vigorous growth to vegetation, while others, equally well skilled in practical agriculture, declare they can see no improvement in their crops by its use. One contends that plaster increases the clover on mowing fields, without any essential benefit to the other grasses; another is sure his potatoes are benefited by its uses, while his corn looks as if consumption mortgaged it, if he depends entirely on plaster to manure his crop.

In looking over the proceedings of the Legislative Agricultural Meeting, March 22, the value of plaster, I perceive, was generally appreciated, except in the county of Plymouth, where the speaker said no effect could be seen from its use except on potatoes.

Mr. SMITH, of Hadley, was sure it would lose its efficacy if applied to the same piece of land for a series of years without the aid of other manures, while Mr. FAULKNER had found the use of plaster to produce the same effect from year to year, even for fifty or seventy years.

Farmers hereabouts agree that a pasture should be lightly stocked after plastering, in order to give the grass a start; this I believe is true, whether plastered or not, and I believe Col. FAULKNER hit the nail on the head when he said he considered the great cause of sterility in pasture lands to be in overstocking them. Grass grows but very little in April, or the first half of May.

Why some fields become green sooner than others in the spring, is because more grass was left on them in the fall; the grass does not grow, but the withered blades turn green. So if the farmer plasters his pasture and takes out half his stock he sees an improvement in the pasture which he ascribes to the plaster, when the cause may be attributed to the stock. I believe our old pastures

need something more than plaster. Many of them are trod exceedingly hard, and the grass roots are short; where the moss has suffered them to remain. Let such land be thoroughly plowed two or three times, and liberally manured, in return for what has been taken from it, the grass roots could then descend to the subsoil and the moss would be ashamed to grow without the aid of plaster.

I would not be understood to say there is no virtue in plaster as a manure; I only say I have not been able to discover its effects. I think it very harmless; it may attract the heat of the sun and force the grass along in the spring. Pick up the stones that have fallen from your walls in the spring; you find the grass higher around them than elsewhere. The question then should be, is it profitable to buy plaster at five or six dollars per ton for manure? Is it profitable for the farmer to buy that for manure, which will not afford him a crop of Indian corn, even if he put a cart load to the rod?

Some years ago I planted a field with corn which others had also planted with the same crop before, and witnessed astonishing effects of plaster. After dressing the same with barn-yard manure, I plastered every hill of the field excepting one row through the field, putting a stake in said row. I harvested the same in autumn, and but for the stake, should not have known the row which did not receive its quota of plaster. Still I may be prejudiced against the use of plaster, and cannot see its favorable effects; while others having favorable opinions, may think they perceive improvement in their crops from its use, when in reality there is none, or if there is, it may be the result of some other cause.

H. FOWLER.

Stowe, March, 1853.

For the New England Farmer.

TAKING HONEY.

MR. EDITOR:—Report says a new method prevails in many places of obtaining honey annually without destroying the bees. The method is somewhat thus:—The hive is suddenly turned over and a new one placed upon it, then by drumming lightly with the hands on the old hive, the bees ascend into the new one, when it may be slipped off and treated precisely like a young hive, leaving you in undisturbed possession of the old one. The advantages are these:—The bees are preserved, and the honey obtained is of superior quality, the comb never becoming dark colored, as is often found in hives that have stood a few years.

Now can you or any of your readers give any more definite information concerning this method, as to the time of year; also, what time in the day is preferable. I should suppose the early morning, or after the bees are still for the night. I should like to know, also, if there was not great danger of the bees leaving the new hive and going away, and if they are not reluctant to leave the old hive.

BENJAMIN STENSON.

Hanover, 1853.

THE STONE GATHERER.—We would inform our young friend that we have no engraving of the machine by which stones are gathered from the fields; a description of the manner in which it is operated was given in the *Monthly Farmer* for August, 1852.

BRUSH SHED SOWER.

The raising of roots for feeding stock, as well as for culinary purposes, is becoming quite common with most farmers. This we are glad to perceive, and shall endeavor to afford such suggestions from time to time as will enable the cultivator to produce root crops at a less cost than he has been able to heretofore. Sowing small seeds by the hand is an exceedingly slow, fatiguing operation. It is necessary to stoop in order to drop the seed into the drill, or it is liable to be blown away by the wind. Then the process of covering is slow and uncertain. But with a good machine one may sow and cover an acre in a few hours, and so evenly, both as to distance and depth, that if the seed is good, scarcely one shall fail to come up, and come in the right place.

We have in use a machine like the one represented above, and find it portable, easily kept in order, and certain in its work. Well, that is all which is desired of it as a seed sower. But we will venture to suggest to the enterprising manufacturer, *Ruggles, Nourse, Mason & Co.*, whether they cannot so arrange them as to assist the sowing and covering part, and in its place supply works to weed and cultivate the crop with less than one-half the labor that is now required to do it by the hand. We believe this may be done so as to make the frame work answer both purposes well.

THE BEE MOTH.—Such of our readers as are engaged in the bee culture will be glad to learn that a remedy has been discovered which effectually prevents the ravages of the bee moth. The frequent and serious injury caused by this pestiferous insect has deterred many persons from entering into the business of raising bees, more especially as in some localities the ravages have been so great as nearly to destroy both bees and honey. The plan is this: Split joints of cane through the centre and arrange them on the four sides of the hive, with the split side resting on the platform. The moth, instead of depositing its eggs under the

edge of the hive, will lay them under the split cane. From these depositories they may be removed and destroyed as often as necessary with little trouble. A friend informs us that he knows the plan has been tried and found entirely successful.—*Mobile Tribune.*

For the New England Farmer.

SCHOOL FARMS, &c.

In what manner can the State beneficially aid the farmer!

This inquiry lies at the foundation of all our action. During the discussions of the present season, there has been an endeavor to avoid the introduction of this topic; and to direct the attention to subjects of a practical character. This has been done, because we would not presume to dictate to the powers that be; and would willingly leave to those in authority, the determination of these matters. It was long ago said with emphasis, that "a cat might look upon a king"—much more then, may the people make suggestions to their rulers; who are the rulers—but the people themselves!—for who does a thing by another, is himself responsible therefor.

Educational Schools and Model Farms first occur to the mind, when this inquiry is made. Without doubt, much might be done, in both these ways. Much has been done, in other countries, by the establishment of schools, for the education of the young farmer—and we have the benefit of their examples. If there could be any assurance that those thus educated here would continue to apply their improved energies to the labors of the farm, there would be some encouragement to give this instruction. But in this land of freedom and of enterprise, where every one is his own master,—*three chances out of four*, as soon as the boy is well prepared to take the superintendence of a farm, he will be off, about something else; and it will not be, until all his visionary plans of advancement have been foiled, and his own physical energies spoiled, that he will learn that it would have been better for him to have applied himself constantly upon the farm. Many learn this lesson, when it is too late to profit by it. It is too common for boys of enterprise, to think that the drudgery of a farm is not suited for them;

and it is equally common for parents to countenance such thoughts—their own pride is flattered with the idea that if their sons can be seen and heard, making a noise in the world, it will in a measure redound to their own credit.

As to *model farms*—how could our County Societies do better, than to take the care and direction of such a farm—each, within their own limits! Most of them have funds ample for the procuring of a farm—and the presumption is, if discreetly purchased, it would continue to be worth what it cost. I know of societies, that for 20 years, have had funds to the amount of *eight or ten thousand dollars*—why not judiciously invest these funds in a farm? Will it be said, that no investment of the kind can be made that *will pay*? That the societies cannot get along without the income of their funds? Is this true? If it be, is it not a most discouraging fact? It certainly is not true, that all farms are unproductive; for numerous instances can be found, in all the counties of the Commonwealth, where individuals have become independent, by the operations of their farms alone. Then, it must be that associated bodies cannot conduct farms so advantageously as individuals. This may be true to some extent in *farming*—but it is not true in *manufacturing*—in this class of industry, the most successful examples are usually found, in associated enterprise. The same would be true in farming—with labor properly directed. If not, let the first movement of the society be, when their farm is purchased, to select an individual of best promise, to take the management of it; and let the trustees hold their monthly meetings, at the farm, not for the purpose of instructing their farmer, but to improve themselves by observing his management. Such an arrangement of model farms, in each county, under the supervision of the County Societies, with a detailed statement of their entire management and products annually made, revised and published by the Secretary of the Board of Agriculture, would, in my judgment, at the present time, be one of the best modes of advancing the interests of the farmer.

Much is said about the application of chemical science to the operations on the farm; and the benefits to be derived from an intelligent understanding of the constituent elements of soils. How is this knowledge to be attained? By study or by labor? I answer, by a combination of these.—Neither, alone, will be sufficient. A man may treasure in his mind all the learning of the books, and be a complete master of all the manipulations of the laboratory; still, without *real experiments* illustrative of the principles thus acquired, he never can be confident in his own knowledge. A man may know all the elements to be found in the analysis of Indian corn, for instance; but still, until the growth of it has been tried upon the field—he cannot say whether or not, it will succeed. The food of plants is not found entirely in the *earth beneath*—the *heavens above* contribute their portion. Therefore, no analysis of the ground alone will ever be a sure indication of the result of the cultivation of a particular crop. All such calculations are based upon the supposition, that other things being equal, and that they will go on, in the ordinary way. Is it not certain that a given quantity of rain is necessary for the production of a crop of corn? Whoever knew a field of corn

come to maturity without rain? But it may be said, the rain will of course come—because it always has come. True, what has been, probably will be. But not necessarily so. Who can say that the dews of the night, are not essential to the maturity of a crop? No one will presume to say that they ever knew a crop come to maturity without being moistened by such dews. Then who can say that the dew is not the one thing needful for perfecting the crop. But the analysis of the elements of the soil gives no information as to the rain from above, or as to the dew of the atmosphere. Who will presume to say, that the electric fluid which pervades all space, has not something to do with the growth and maturity of plants? If I do not mistake, theories have been started, tending to show that *electricity* is an essential element in the growth of plants. And plans have been proposed of advancing their growth by electrical operations. But I am not aware that Chemistry or Philosophy, have as yet defined with any precision, the laws of Nature in this particular. Perhaps when we fully understand the transmission of ideas from shore to shore, by means of magnetism, we shall better comprehend the power of electricity in the growth of vegetables.

If it be true, as learned professors, not of Massachusetts, particularly, confidently assert, that the soils of our fields can be so subdivided and analyzed, that their productive powers can be estimated, with as much precision as the hours of the day can be numbered, it is high time this were known, and the means of doing this placed at the command of every cultivator. Where in Massachusetts can this science be attained?—Where can a young man go to learn practically the sure method of analyzing soils? Can it be done at Cambridge, the fountain of knowledge for New England. It may be, that it can be there acquired; but I have not had the good fortune to meet any of the sons of Cambridge thus learned. Can it be acquired at Amherst? If so, who will teach it? President Hitchcock and Professor Nash say, they themselves are anxious to acquire the art. They do not profess to know it. They are modest, honest, sensible men, willing and ready to tell what they know, and nothing more. Would others, in like position, do this and no more, science would be respected. But when the learned mingle the marvellous with the real, and thus impose on the credulity of those whom they address, they very soon cease to command respect. P.

April 12, 1853.

HOW TO RAISE FRUIT EVERY YEAR.—If rightly understood, few trees, unless absolutely dead or rotten, need occupy ground, without yielding a plentiful crop. After a long and varied series of experiments, I gradually adopted the following mode: As soon as the winter has sufficiently disappeared, and before the sap ascends, I examine my trees; every dead bough is lopped off, then, after the sap has risen sufficiently to show where the blossoms will be, I cut away all the other branches having none on, and also the extremity of every limb the lower part of which bears a considerable number of buds, thus concentrating the sap of the tree upon the maturation of its fruits, and saving what would be a useless expenditure

of strength. In the quince, apricot and peach trees, this is very important, as these are very apt to be luxuriant in leaves and destitute of fruit. You may think this injures the trees, but it does not; for you will find trees laden with fruit, which formerly yielded nothing. Of course, all other well-known precautions must be attended to; such as cutting out worms from the roots, placing old iron on the limbs, which acts as a tonic to the sap, &c. Try it, ye who have failed in raising fruit.—*Farmer and Mechanic.*

THE GOOSEBERRY.

HOW TO RAISE THE HANDSOMEST PLANTS OF THE NATIVE VARIETIES.

In the early spring of 1849, when the buds of the wild gooseberry began to burst, I took an April sylvan excursion through damp places, and with a sharp pruning knife cut as many vigorous and clean shoots as I could find, from the different kinds of the much neglected native gooseberry.

Having made a large collection of cuttings for the purpose of propagation in a nursery bed, I cut them short—one foot long—rejecting the tender parts and trimming all the buds off, except three or four upper ones. Then I planted them in a rich, well trenched, and rather moist soil, 6 inches apart in straight rows. The soil around them was kept loose and clear of weeds by frequent hoeing, and in a good condition by occasional waterings. In the fall they were found very fine plants—strong rooted—fit for transplanting the next season; they shoot from 12 to 18 inches high the same season. To render the plants more vigorous, I clipped the tender ends of the limbs, trimming them in the form of miniature trees.

The second year they yielded a plenty of nice fruit, of a double size. The third year all the plants were heavily loaded with still larger berries of different colors and flavor. Last season I picked fifty quarts of much larger gooseberries, beside what were eaten by my friends and visitors to my fruit garden. Some of my native gooseberries seemed much larger than Houghton's seedling gooseberry.

I know of no sort of gooseberry which promises so much, and seems so easy of cultivation, with so little labor, and so well adapted to our climate, as our native gooseberry. This gooseberry is, though very sweet, delicious and rich in its wild nature, much despised on account of its small size, in comparison to the pride of Lancashire Horticulturists, who have, by their unspared pains of perseverance, improved the insignificant size and inferior qualities of their wild European gooseberry to a wonderful size and richness of flavor.

Are we, American horticulturists, who enjoy the blessings of undisturbed freedom on our virgin soil beneath a bright sun, slaves dependent upon a foreign nation for her horticultural skill in producing a celebrated species of gooseberry, which is so imperfectly suited to our climate? Why do not we try to do the same towards improving our native gooseberry, which is not only perfectly adapted to our soil, but also promises to pay well for whatever attention we shall be willing to bestow upon it? If our American apples are far superior to those of England, I can see no reason why we may not produce American varieties of

gooseberry, superior—even far superior to those of far-famed Lancashire, by hybridizing our native gooseberry with the choice sorts, and by repeated sowing of seed of fine kinds.—*Farmer and Mechanic.*

For the New England Farmer.

WHAT SHALL I DO?

EDITORS FARMER:—At the present prices paid for farm labor compared with that of mechanical, what inducement is there for a young man of talent and energy to follow farming?

In this section, bootmakers obtain for their work from \$1.25 to \$2.00 per day, while the same men could not command more than from \$10.00 to \$15.00 per month on most of our farms, and that only for the summer months. The old farmers hereabouts shrug their shoulders and complain bitterly at paying over \$13.00 per month.

Now I would like to ask if you would advise me, or any other young man, who can get \$2.00 per day at a trade, to learn it, or refuse it and work on a farm. I want to be a farmer, but when I consider that I am like thousands of other young men, starting unassisted, without money or land, I am almost discouraged. Most young men with whom I converse, own, that farming is the best business in the world, and say that they would farm it, if they only had land of their own. But as to working out by the month for 50 cents per day, they will not do it.

Now I wish to know if you can blame them, or call them unwise.

c. w. a.

S—, Mass.

REMARKS.—If our young friend can actually earn more money, and can keep it profitably and securely invested, in some other way than by working on a farm, why, then, he had better spend a few years, perhaps, in some other employment. But if he intends to pursue farming after a while, he must be a close observer, thinker, and reader of farm matters during these years, and he will thus qualify himself for his future business while he is accumulating the means to engage in it. It is not desirable that all shall be farmers, but those who have a decided taste for farming should make all their plans tend that way; and there are, undoubtedly, various modes of obtaining a farm, beside working on one at fifty cents a day. If your opportunities enable you to get \$2.00 a day, do so, until such time as you can invest your earnings in the spot which you intend to make a permanent home. But the subject is an interesting and important one, and perhaps some of our correspondents who have the leisure and inclination will speak of it more at length than we are able to at present.

✂ M. Eugene Sue states that in Savoy, all the farm-work of plowing and drawing, instead of being done by horses or oxen, is performed by milch cows, which work eight or ten hours a day, without the slightest depreciation of the quality or quantity of milk.

CONCORD FARMERS' CLUB.

The Concord Farmers' Club had its annual supper on the evening of the 19th of April, at the Town Hall. The evening was one of the most beautiful of the season, and about two hundred plates were occupied at the table. After spending one hour in social intercourse, the company came around the tables, which were very tastefully spread, about 9 o'clock, and after partaking of the good cheer which was liberally provided by Mr. SILAS HOSMER, the President called up Mr. SIMON BROWN, who gave a sketch of the origin of the Club. He was followed by Rev. Mr. FROST, who spoke of the progress which has been made in farming, during the past 15 years. After he had been in town 4 years, some one sent him a plate of cherries. He then remarked they were the first cherries he had seen in Concord. Now, not only cherries, but plums, pears and apples are very abundant, in great variety and in high perfection. He spoke of the fine barns with their cupolas, which had been mistaken for churches, and of the greatly improved appearance of farms, all over town, and then of the intellectual and moral effect of this progress in the cultivation of the earth.

Dr. REYNOLDS then gave a humorous sketch of the doings of the club, and enumerated the subjects in their order, which had come under discussion during the winter. His remarks were received with great enthusiasm.

Judge HOAR was then called upon. He spoke of the day and the events associated with it in the history of the past, of the example of our revolutionary fathers, and of the great obligations which we are under to them. They perilled their lives and all that was dear to them, and we, their sons, are reaping the rich harvests which have sprung from the seed which they sowed; and they have left to their descendants a treasure richer than gold. They have left a name that will be cherished, when the mere possessor of gold will be forgotten. They sowed in tears and blood, and the harvest is now being reaped by millions of freemen all over the land. He hoped the Farmers' Club would continue to select this day for their anniversary, and thus hand down to their children the memory of those farmers, who upon this day, in defence of their hearths and their fields, poured out their blood upon the soil of Concord.

Col. J. S. KYES was next called up. He did not think it quite fair that all but the members of the Club should be called on to speak. He wished to hear from the farmers themselves. He was pleased with the festival; we have too few holidays. He was glad the farmers have instituted this gathering, and hoped it would be continued on this day. Such meetings have a good effect on our social feelings.

A humorous and excellent agricultural song was

then sung by Mr. JOSHUA R. BROWN. He was followed by the venerable SAMUEL HOAR, who made some remarks upon the intellectual and moral effects of improvement in Agriculture and Floriculture. Mr. R. W. EMERSON made a short and pleasant speech, and was followed by W. W. WHEILDON, Dr. BARTLETT, C. W. GOODNOW and O. B. DAVIS.

The speeches were interspersed with toasts prepared for the occasion, and followed by volunteer sentiments; and at about 11 o'clock the company broke up, feeling the occasion had been a pleasant and profitable one. The young people were present in force, and although many of them are not engaged in agricultural pursuits, they were willing to give countenance to the Club, and hear something of the Great Art which feeds and clothes them in common with all.

We are requested to tender the thanks of the Club to the ladies and gentlemen of the town, for their attendance, for their efforts to make the evening a pleasant one, and for their kind expressions of approbation of the designs and influence of the Club.

For the New England Farmer.

A SHOWER OF MUD.

DEAR SIR:—Enclosed you will find a small package of a substance that I should like to have analyzed by some chemist, if you think advisable, for I should like to know of what it is composed, and where it came from, if the scientific world can tell. It came in my possession in the following manner: On the 8th inst., about sunset, there was rather a singular phenomenon visible in the heavens. On the morning of the 9th it commenced snowing—the snow, as it lay on the old snow, had a rather dark, or bluish appearance; it rained in the afternoon and froze a little the following night. The next morning I skimmed off the dark crust and melted a paulful of the snow; the water was highly colored, having a dark, bluish appearance. The package is the sediment that settled and was dried down by the fire. I could save but a small proportion of what was in the water, for it would not settle.

There must have fallen several thousand bushels in this State alone, to say nothing of what fell in others, if the storm was very extensive, and I should like to know what it is and where it came from.

S. OSCAR CROSS.

Kingsbury, March 19, 1853.

A PAINT FOR BRICK HOUSES.—A correspondent of the *Ohio Farmer* has used a cheap and very durable paint for the exterior of brick dwellings, which has already stood several years, and is now quite as fresh as when first applied. It consists simply of lime-wash, with sulphate of zinc as a fixing ingredient. Any requisite shade is given by adding the colors used by house-painters. A clear and rich cream color may be obtained by applying yellow ochre to the common new brick; a livelier and warmer shade will be added by a little Venetian red. Burnt sienna may likewise be used. This paint is far cheaper than oil paint, and costs but little more than common whitewash.

THE GOOD EFFECTS OF GARDENING.

"Gardening is a civilising and improving occupation in itself; its influences are all beneficial; it usually makes people more industrious, and more amiable. Persuade a careless, indolent man to take an interest in his garden, and his reformation has begun. Let an idle woman honestly watch over her own flower-beds, and she will naturally become more active. There is always work to be done in a garden, some little job to be added to yesterday's task without which it is incomplete; books may be closed with a mark where one left off, needlework may be thrown aside and resumed again; a sketch may be left half finished, a piece of music half practiced; even attention to household matters may relax in some measure for a while; but regularity and method are constantly required, are absolutely indispensable, to the well-being of a garden. The occupation itself is so engaging, that one commences readily, and the interest increases so naturally, that no great share of perseverance is needed to continue the employment, and thus labor becomes a pleasure, and the dangerous habit of idleness is checked. Of all faults of character, there is not one, perhaps, depending so entirely upon habit as indolence; and nowhere can one learn a lesson of order and diligence more prettily and more pleasantly than from a flower-garden.

"But another common instance of the good effect of gardening may be mentioned:—it naturally inclines one to be open-handed. The bountiful returns which are bestowed, year after year, upon our feeble labors, shame us into liberality. Among all the misers who have lived on earth, probably few have been gardeners. Some cross-grained churl may set out, perhaps, with a determination to be niggardly with the fruits and flowers of his portion; but gradually his feelings soften, his views change, and before he has housed the fruits of many summers, he sees that these good things are but the free gifts of Providence to himself, and he learns at last that it is a pleasure, as well as a duty, to give. This head of cabbage shall be sent to a poor neighbor; that basket of refreshing fruit is reserved for the sick; he has pretty nosegays for his female friends; he has apples or peaches for little people; nay, perhaps in the course of years he at length achieves the highest act of generosity—he bestows on some friendly rival a portion of his rarest seed, a shoot from his most precious root! Such deeds are done by gardeners."

—Miss Cooper's "Rural Hours."

EQUIVALENT VALUE OF DIFFERENT KINDS OF FOOD.

—The following table gives a synoptical equivalent value of different kinds of food; albumen representing the flesh-forming principle, and unassimilated matter the fat-forming. —*Playfair.*

	Albumen.	Unassimilated Matter.
Peas.....	29	514
Beans.....	31	53
Lentiles.....	33	48
Potatoes.....	2	244
Oats.....	104	68
Barley Meal.....	14	68
Hay.....	8	684
Turnips.....	1	9
Carrots.....	14	84

From the above table we see why pigs fed upon potatoes and barley meal soon fatten and keep in health; whereas, when supplied with potatoes en-

ly, they become fat, but are unhealthy. It will also teach us that the milk of cows, from which butter is to be made, would be benefited by mixing their food with steeped peas and beans.—*Top-ham.*

TO CORRESPONDENTS.

Thanks to L. W. C.,—*Southbridge, Mass.* Shall be happy to hear from him again.

To N. P. M.,—*Somerville.*—The beautiful apples left by you are probably local. You must give them such a name as your own fancy, or some peculiarity in their origin or growth, may suggest.

To G. N.,—*Bedford, N. H.*—The cause of your plum tree peeling was undoubtedly extreme cold. The sap froze, and in expanding, pressed the bark from the wood, and as far as this extends the bark will die. We have seen several trees affected in the same manner. A too vigorous growth is apt to induce this difficulty.

DANVERS WINTER SWEET APPLES—brought in by Dea. FOWLER, as hard, fair and beautiful as they were in December last. It is a valuable variety, but does not succeed equally well in all locations.

A YOUNG READER,—*S., Mass.*—If your grass seed mostly failed, the best way is to plow and sow again with an oat or barley crop. If killed only in patches, clover seed should have been sown in March. If the spots were sprinkled now with fine compost and herd's-grass and red-top seed, raked in, it will make the field even and give a partial crop this year.

We cannot inform you what kind of bee-hive is best. See notice in this paper of a new hive, which, to us, seems to promise more than any thing we have seen or heard of yet.

Make your soil deep and rich for strawberries. Manure from the pig-pen or hen-house is excellent. If your land is a stiff clay soil, horse manure, thoroughly incorporated with it, will be good. Cut the runners about the stool with a sharp spade, and pinch off the new ones until the fruit is well set.

To D. F. G., *Woodstock, Vt.* You must rely on the natural resources of your farm to increase its fertility. A little plaster, guano, bone dust, ashes or phosphate of lime may be tried on a portion of your hill pastures, with propriety—or they may be used on your corn or grain fields or garden, in small quantities, and on small portions of land, each year. It is unwise for the farmer to engage in new and untried schemes with costly manures, on an extensive scale. Use them moderately, if at all, and with the most careful observation. The whole subject has been repeatedly discussed in the *Farmer* within the last six months, and prices given, both in advertisements and editorial columns. "A reader of the *Farmer*" may obtain scions of the Hunt Russet, of Capt. NATHAN BARRETT, Concord, Mass. Don't know about the Pippin.

Ladies' Department.

THE SECRET OF MATRIMONIAL HAPPINESS.

Zschokke, in one of his tales, gives the following advice to a bride:—"In thy first solitary hour after the ceremony, take the bridegroom and demand a solemn vow of him, and give him a vow in return. Promise one another sacredly, never, not even in jest, to wrangle with each other; never to bandy words or indulge in the least ill-humor. Never, I say, never! wrangling in jest, and putting on an air of ill-humor merely to tease, becomes earnest by practice. Mark that! Next, promise each other, sincerely and solemnly, never to have a secret from each other, under whatever pretext, with whatever excuse it might be. You must continually, and every moment, see clearly into each other's bosom. Even when one of you has committed a fault, wait not an instant, but confess it freely—let it cost tears, but confess it. And as you keep nothing secret from each other, so, on the contrary, preserve the privacies of your house, marriage state, and heart, from father, mother, sister, brother, aunt, and all the world. You two, with God's help, build your own quiet world; every third or fourth one whom you draw into it with you, will form a party, and stand between you two. That should never be. Promise this to each other. Renew the vow at each temptation. You will find your account in it. Your souls will grow as it were together, and at last will become as one. Ah, if many a young pair had on their wedding day known this secret, how many marriages were happier than, alas, they are!"

FAMILY HARMONY.

1. We may be quite sure that our will is like to be crossed in the day; so prepare for it.
2. Everybody in the house has an evil nature as well as ourselves, and therefore we are not to expect too much.
3. To learn the different temper of each individual.
4. To look upon each member of the family as one for whom Christ died.
5. When any good happens to any one, to rejoice at it.
6. When inclined to give an angry answer, to lift up the heart in prayer.
7. If from sickness, pain, or infirmity, we feel irritable, to keep a very strict watch over ourselves.
8. To observe when others are so suffering, and drop a word of kindness and sympathy suited to their state.
9. To watch for little opportunities of pleasing, and to put little annoyances out of the way.
10. To take a cheerful view of everything, and encourage hope.
11. To speak kindly to the servants, and commend them for little things when they deserve it.
12. In all the little pleasures which may occur, to put self last.
13. To try for "the soft answer that turneth away wrath."
14. When we have been pained by an unkind word or deed, to ask ourselves,—"Have I not often done the same, and been forgiven?"

15. In conversation, not to exalt ourselves but bring others forward.

16. To be very gentle with the younger ones, and treat them with respect, remembering that we were once young too.

17. Never to judge one another, but attribute a good motive when you can.

18. To compare our manifold blessings with the trifling annoyances of life.

19. To read the scriptures every morning, and ask God's blessing to attend each member of the family through the day.

Advertising Department.

A limited number of advertisements of an appropriate character will be inserted in the monthly Farmer at the following

RATES.

For one square of 15 lines, one insertion.....\$1.00

For each subsequent insertion......50

The above rates will be charged for all advertisements, whether longer or shorter.

A Card to Dairymen.

CLARKE'S EXCELSIOR CHURN is, beyond all question "the best churn for large dairies. The two favorite sizes, are \$7.00 and \$10 each. The latter size is suitable for ten to thirty cows, indeed, for any large dairy, as one hundred pounds of first rate butter can be produced in it, at three churnings, in less than one hour. It will be delivered on all paying orders, in Boston, New York, and Buffalo, free of charge for freight.

Every churn sent out is warranted to PLEASE! This new and saleable churn presents great inducements to capitalists and manufacturing companies to purchase State and County rights. For full description, recommendations, &c; apply at any time, to GEO. B. CLARKE, Patentee, Leominster, Madison Co., N. Y.

May 1st, 1858.

1m7

Sale of Short Horned Cattle.



I will sell by auction, at my residence, on WEDNESDAY, 8th June next, at 1 o'clock P. M. about thirty thorough bred Short Horned Cattle. About twenty of them are Cows and Heifers, the remainder young Bulls. Nearly every animal are the produce of the Imported Bull "YORK SHIREMAN" and 3d "DUKE OF CAMBRIDGE," bred by the late Thomas Bates, Esq., of Kirkleavington, England, and "EARL OF SHAMAM" and "VAN TEMPEST," bred by John Stephenson, Esq., of Durham, England, and are of his famous Princes family.

The upset prices of these animals will be from \$150 to \$300, as to age, &c., &c.

I will also offer the above named Imported Bull, "Van Tempest,"—his upset price is \$1000.

Terms—Cash, on satisfactory notes at three months, payable at the Bank of Auburn, with interest.

I will also have for sale at that time a few South Down Rams and Suffolk Pigs.

Catalogues will be ready about 15th March next, and will be found with

A. B. Allen, Esq., 69 Water Street, New York.

Sanford Howard, Esq., Cultivator office, Boston.

Luther Tucker, Esq., and B. P. Johnson, Esq., Albany.

L. F. Allen, Esq., Black Rock.

M. B. Bateham, Esq., Columbus, Ohio.

W. T. Dennis, Esq., Richmond, Indiana, and with the subscriber.

J. M. SHERWOOD.

Auburn, N. Y., March 12, 1858.

*2

Clover and Grass Seeds.

NORTHERN Herds Grass.

Western Herds Grass.

Northern and Southern Red Top.

Northern, Western and Southern Red Clover.

White Dutch Clover.

Orchard Grass.

Kentucky Blue Grass.

Fowl Meadow Grass, &c. &c.

All of the growth of 1858, and of best quality. For sale by

RUGGLES, NOURSE, MASON & CO.,

March 26, 1858.

Over Quincy Market, Boston.

The Farmers' Library.

JUST RECEIVED, the following assortment of Agricultural and Horticultural Books, embracing the standard works of eminent American and European writers, on the Farm, the Orchard, the Garden, &c. &c.

	PRICE.
American Farm Book, by Allen,	\$1.00
Farmer's Treasure, by Faulkner and Smith,	.75
Dana's Muck Manual,	1.00
Prize Essay on Manures, by Dana,	.25
American Muck Book, by Browne,	1.00
Lectures on Practical Agriculture, by Johnstone,	.75
Elements of Scientific Agriculture, by Norton,	.50
Principles of Agriculture, by Thaez,	2.50
Practical Agriculture, by Johnstone,	.75
Agriculture for Schools, by Blake,	1.00
Catechism of Agriculture and Chemistry, by Johnstone and Norton,	.25
American Agriculturist, by Allen,	1.00
Liebig's Complete Work on Chemistry,	1.00
Farmer's and Emigrant's Hand Book, by Marshall,	.75
Home for all, by Fowler,	.50
Book of the Farm, by Stephens and Skinner,	4.00
Cottage and Farm Houses, by Downing,	2.00
Downing's Country Houses,	4.00
Rural Architecture, by Allen,	1.25
Downing's Landscape Gardening and Rural Architecture,	3.50
Downing's Cottage Residences,	2.00
Fruit Garden, by Barry,	1.25
Complete Gardener and Farmer, by Fessenden,	1.25
Bridgeman's Gardener's Assistant,	2.00
Bridgeman's Kitchen Gardener's Instructor,	.50
American Fruit Culturist, by Thomas,	1.00
Gardener and Complete Florist,	.25
Florist's Guide, by Bridgeman,	.50
New England Fruit Book, by Ives,	.50
Yount and Martin on Cattle, by Stevens,	1.25
Rose Culturist,	.25
Johnson's Gardener's Dictionary, by Landreth,	1.50
Rural Economy, by Bouslingault,	1.00
American Rose Culturist,	.25
Bigelow's Plants of Boston,	1.25
Genera of Plants of the U. S., by Gray, 2 vols.	12.00
Gray's Botany,	2.00
Farnell's Chemistry,	1.00
New England Farmer, by Cole,	1.00
Ladies' Guide and Skilful Housewife, by Mrs. Abel,	.25
Hive and Honey Bee, by Richardson,	.25
Bee Keeper's Manual, by Miner,	.50
Bird Fancier, by Browne, paper 25 cents,	.50
Townley on Bees,	.50
American Poultry Yard, by Browne,	1.00
American Poultryers' Companion, by Bennett,	1.00
American Fowl Breeder, by Moore,	.25
American Herd Book, by Allen,	2.00
American Shepherd, by Morrill,	1.00
Domestic Animals, by Allen,	.75
Diseases of Animals, by Cole,	.50
Hints to Sportsmen, by Lewis,	1.25
Dodd's Anatomy and Physiology of the Horse,	1.00
Mason's Farrier and Stud Book, by Skinner,	1.25
Management of Sheep, by Candfield,	1.00
Yowatt on the Pig,	.60
Knowlson's Complete Cow Doctor,	.25
Horse Doctor,	.25
Gueson's Treatise on Milch Cows,	.25
Treatise on Hot Houses, by Leachman,	1.00
Allen on the Grape,	1.00
Schenck's Text Book,	.50
Breck's Book of Flowers,	.75
Downing's Fruit and Fruit Trees,	1.50

For sale at the Publishers' prices by RUGGLES, NOURSE & CO., Quincy Hall, (over the Market,) Boston.
Jan. 1, 1883.

A. L. Bingham's Third Annual Sheep Shearing Festival.

THE undersigned gives notice that he will hold his Third Annual Sheep Shearing Festival, at the well known resort of James K. Hyde, in Sudbury, Rutland County, Vermont, on the first and second days of June next, commencing at ten o'clock A. M. He proposes to shear publicly, from fifty to one hundred French Merino Ewes, with a view to enable all interested in this branch of production, to see and judge for themselves of the weight and value of these sheep as compared with others. All wool growers, and manufacturers are respectfully invited to attend. Several very superior Bucks and Ewes, of the best French importations and stock, will be on exhibition and for sale. A number of gentlemen largely interested in the celebrated Black Hawk and other Morgan Horses, have signified their intention to avail themselves of the occasion to exhibit a splendid collection of the best horses in Vermont.

A. L. BINGHAM.

West Cornwall, Vt., April 1, 1883.

Walnut Grove Nursery.



The subscribers would respectfully inform their friends and the public, that they have on hand an unusually large stock of Apple, Pear, Plum, Cherry, Peach, and other Trees.

Also, Quinces, Currants, Raspberries, Grapevines, &c., &c.

Ornamental Trees, and Shrubs, Buckthorn Plants, &c. &c.

Lot of Seedling Horse Chestnut, two years old.

Lot of European Sycamore, two years old.

Good plants of the new and improved high bush Blackberry, the fruit of which is of enormous size.

Fine Apple Trees, three to five years' growth from bud, seven to nine feet high, \$25 per hundred.

Also, a fine lot of Norway Spruce, good size.

We devote ourselves solely to the raising of trees; they receive our strict personal attention; we are therefore able to warrant every article true to name.

Those who intend purchasing large quantities of Apple Trees are respectfully invited to call before purchasing, and examine our stock, as it is large, and doubtless unsurpassed by any in the vicinity.

Trees delivered in Boston free of expense, packed if desired. Catalogues sent to post-paid applicants. All orders thankfully received and promptly executed.

JAMES HYDE & SON.
Newton Centre, Mass., March 26, 1883.

AGRICULTURAL

WAREHOUSE AND SEED STORE,

QUINCY HALL, OVER THE MARKET, BOSTON.

THE Proprietors having recently enlarged their Warehouse, and increased their works at Worcester, would respectfully invite the attention of Planters and Dealers in AGRICULTURAL & HORTICULTURAL IMPLEMENTS, GARDEN and FIELD SEEDS, &c., to their stock, comprising the largest and best assortment to be found in the United States, which are offered at low prices.

OF PLOUGHS—we have the greatest variety of kinds and sizes.

Improved Sod Ploughs, for flat furrows—Improved Scotch Ploughs for lapped furrows—Improved Stubble Ploughs, which are especially adapted to deep tillage, or varying from 6 to 12 inches in depth.

Self-sharpening, Hill Side, Sub-soil, Double Mould, Corn, Cotton and Rice Ploughs.

Cylinder Hay Cutters, Smith's Patent Lever Gate, and others.

Patent Corn Shellers, with and without Separators.

Seed Sowers, of various sizes and prices. Batchelder's patent Corn Planter, improved. Fanning Mills of various sizes.

Corn Powers, Threshing Machines, thermometer Churns, Robbins' patent Centrifugal Churn, Cylinder Churn, Dash Churn, Corn Planters, together with almost every article wanted on the Plantation, Farm or Garden.

Illustrated Catalogues sent gratis on application, post paid. RUGGLES, NOURSE, MASON & CO.

Boston and Worcester, Mass., Jan. 1, 1883

Morgan Stock Horse for Sale.



For sale by the subscriber, a Morgan Colt, 4 years old last May, weight 1125 lbs., the best model of his Sire (the Green Mountain Morgan owned by Hale) that can be found in New England; his color and action, his temper, and gait, are like the old horse and he is reputed to be the best roadster of the whole race of Morgans.

C. W. BELLOWES.
Pepperell, Mass., March 12, 1883. On Nashua and Worcester Railroad.

Farm to be Let.



That well known farm in the southerly part of West Cambridge, called the "PERRY FARM." It consists of about 100 acres, divided into orcharding, tillage and pasture, and is at present cultivated as a milk and fruit farm. The buildings, &c., are sufficient and in good order.

For terms and particulars, please apply to WM. MAPLES-DEN, on the premises.

Feb. 26.

Super-Phosphate of Lime,

IN bags and barrels, made by C B DeBURG, a warranted pure and genuine article, with full directions for use. For sale by GEO. DAVENPORT, 5 Commercial, corner of Chatham St., Boston, agent for the manufacturer.

Also, for sale, Ground Bone, Bone Dust, Burnt Bone, Guano, and Grass Seeds of reliable quality.

March 26, 1883.

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March 24, 1853. Over Quincy Market, Boston.

NEW ENGLAND FARMER

Is published on the first of every month, by JOHN RAYNOLDS and JOSE NEWMAN, at Quincy Hall, South Market St., Boston.

SIMON BROWN, Editor.

FREDERICK HOLBROOK, } Associate
HENRY F. FRENCH, } Editors.

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OFFICE....QUINCY HALL.

SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

CALENDAR FOR JUNE.

Lo! The winter is past; the rain is over and gone; the flow-
ers appear on the earth, the time of the singing of birds is
come, and the voice of the turtle is heard in our land.—Song
of SOLOMON

Thus sang one, said to be the wisest among men. The changes of the seasons, the times when the birds came and began to sing, and the voice of the turtle was first heard, when the beautiful flowers appeared, and all the new and varied aspects of nature presented themselves, were not unnoticed or disregarded by him, filled with wisdom as he was beyond the usual capacity of men. That wisdom rather gave him new powers to appreciate their wonderful structure, usefulness and beauty; and in the fulness of his heart he gave utterance to the pleasant song which we have quoted above.

Solomon probably looked at these revelations of nature *individually*, as well as collectively, as we believe any wise man must. Most of us live altogether too fast.

Spring comes, and all the elements of fertility are active; frost and snow disappear, while strong winds sweep off the redundant moisture. The more vertical solar rays warm the earth, set the sap in motion and cause the flowers to appear, studding the shrubs and trees as with so many gems; they deck the landscape with their graceful forms and brilliant colors, while no nook is so secluded, or hill-side so poor as not to produce, with a seeming extravagance, these beautiful and gentle denizens of the field and forest.

We look and admire, perhaps exclaim, "how past all human skill they are," and forget them. We have looked on them as a whole, and retain no distinct recollection of any. So, we think, did not Solomon. Now look at that bed of tulips,

—"where beauty plays
Her idle freaks,"

or that branch from the gnarled oak, with its tiny apples and tasseled flowers, or the blade of corn or grass,—look at these with a little study and thought, and you seem to arrest the march of

time, by fixing an enduring impression of the varied attractions of this season on the mind. The mind has something *individual* and *positive* to go back to, whose associations will introduce again the whole panorama of this delightful period.

To "know a little of everything" is well; but to know a *good deal* of some things will afford the most substantial enjoyments. To know more of farming will be to know more of these things of which we are speaking; and to know these we must give them attention, thought and investigation, *separately*. Pause, then, under this tree, examine its bark, the form of its branches, its leaves and flowers, and let this examination be the subject of your reflections for the next hour. And so of other things. Let there be a daily examination of some of the stones, insects, plants or flowers about you; it is all "in the line of your duty," as the military men say, and *will increase your power over the crops in your future operations, as well as multiply the dimes in your pocket!*

Some may say that all this is *not practical*,—and has no bearing on their calling. So said the bystanders to NEWTON, and FRANKLIN, and FULTON. Who could see a passage to Europe in eleven days, in the wheels and sheet iron pots of Fulton! or the lightning drawn from the clouds and quietly deposited in the earth, inert and harmless, through the bobs and strings and iron keys of that crotchety fellow, BEN FRANKLIN!

It is practical. A better knowledge of the wants of plants leads to a better cultivation of them, and a greater profit from the labor expended. We shall yet find something in farming, beside the expenditure of muscle on the clouds and dung-heaps; and that false notion which prevails with so many; and cries in the ears of the farmer,—toil, toil, eighteen hours per day are demanded,—must ere long give place to more enlightened views and practices.

But connected with this practical part, there

are other matters no less important, and to a few of which we will briefly advert.

JUNE is one of the fervid months; hot suns and drying winds usually prevail, and unless there are frequent showers, plants will begin to fail where careful cultivation is neglected. Much may be done to prevent this, by a frequent stirring of the soil, by *mulching* the young trees, shrubs, tomatoes and other plants, and an occasional watering of those considered the most valuable. When watering is resorted to, it should be done liberally, wetting the ground thoroughly about the roots of the plant, and then omit for a few days. A frequent dribbling of water only wets a little below the surface which soon becomes caked, and prevents the admission of air and atmospheric influences.

Those who are cultivating dwarf pears, or any young trees, will find much benefit from *mulching*; it prevents excessive evaporation, and weeds from springing up; keeps the ground porous, and yet, if properly done, will admit heat sufficient for the vigorous growth of the plant. Coarse hay, straw, leaves, saw-dust, tan, fine brush, such as the tops of white birches, or fine chips from the door-yard, will answer a good purpose. It should be laid loosely, and not so thick as to prevent the rays of the sun from reaching the ground.

THE GARDEN will require *daily* care. Weeds will grow while you sleep, or take your "nooning." Give the garden a half hour's attention just after milking every morning. Fill the waste corners with cabbages for the cows; a few hundred heads may be raised in this way and the labor scarcely be felt.

MILLET.—This is a fine crop for haying for winter fodder. Some farmers of experience say it is as valuable as an equal amount of English hay.—Sow about the 10th of June, *eight quarts* of seed to the acre. See recent articles in the *Farmer* on this subject.

HOING.—If the season is a dry one, cultivate a flat surface; but if rainy, as was the summer of 1850, perhaps slightly hilling the corn and potato crop may prove advantageous. The clear, hot days are the days for hoeing; leave the weeds on the surface a few hours at such a time, and they will trouble you no longer.

HAYING.—If some particular pieces of grass lodge and require to be cut early, do not allow this beginning to call off your attention entirely from the *hoeing*. Great losses are annually sustained among us by this practice. No weeds should be allowed to grow among your hoed crops; and the ground ought to be stirred once in 10 or 12 days, *if there are no weeds!* This was JETHRO TULL's theory, and he proved its efficacy by the test of practice.

YOUNG TREES.—Trees coming into blossom for the first time, should not be allowed to perfect

much fruit. If it grow on the ends of the limbs it bends them out of shapes and diverts the sap from making wood into the fruit, while the growth of the tree is what is desired.

THE CURCULIO.—Sift lime-dust over the plum and apricot trees when the dew is on them, and this little plague will not sting the fruit. Two or three sprinklings, at intervals of several days, will probably be sufficient. Try the same remedy on some of your apple trees.

STRIPED BUGS.—Many persons say that a box put round the plants will positively prevent the attack of these bugs. Three shingles 5 or 6 inches high, supported by the earth or sticks, answer every purpose. Mr. T. O. PAINE, in the *Eastern Mail*, says he has practised this plan with success for 12 years.

For the New England Farmer.

PASSING MATTERS.

BY A. G. COMINGS.

IMAGINATION IN COWS.—Being at Milford, N. H., a short time since, I learned from Mr. P. M. Rossiter, of that place, a singular and striking case illustrative of the effect of imagination in cows. Sometime during the winter Mr. Rossiter lost a cow, and the following circumstances attended the case. The cow died in the evening, and was skinned by candle-light, that is, by lamp-light, in a part of his barn, at some distance from his cow stable. The position of the cows was such that when the body of the dead animal lay upon the back the legs would be in full view of the cow in the stable. In such a position they were skinned, and the matter disposed of, on that evening.

In the early part of March, if my memory is correct, a very fine Devon cow gave a calf, which, was most singularly marked in the legs, they being in a great measure destitute of hair or even skin upon the lower portion of the legs, and the hind legs were without feet, that is, without hoofs.

The case is one which should be attributed, doubtless, to the effect of imagination in the cow. It is a strong case, as I had the statement, which I presume was correct. If imagination produced such an effect in the days of Jacob, in the color of cattle, what other effects may follow from the same cause we cannot determine. It appears to me to be indicative of an unusual degree of intelligence, as it is common for people to express it, in certain animals; and certainly some of Mr. Rossiter's cattle look as though they did really know something, if they cannot talk.

MILFORD VILLAGE, &c.—It is decided that the Hillsborough County Agricultural and Mechanical Society will hold its next annual fair at Milford, on the 28th and 29th of September next. We expect to be favored with an Address on the occasion from Hon. John W. Proctor, of Danvers, Mass. The first fair of the Society was at Milford in the fall of 1850. So the next will be our fourth annual fair.

At that place a large number of Eagle plows are manufactured, from whence they go to California, Australia, Oregon, the Sandwich Islands, &c., as well as for a large sale nearer home. The

agents, Messrs. Putman and Chase, are doing a great business in that line. With the immense business of other establishments turning out thousands of improved implements yearly, perhaps I might say, *daily*, it shows the throbbing pulse of an advancing people for improvement.

EXPERIMENT ON A TREE.—Late in April, in the spring of 1852, two men paid a visit by night to an orchard which is subject to my care, and gratified their propensities by cutting down, &c., a large number of fruit trees. I discovered what had been done very early the next morning, and upon one tree, some ten or twelve inches through, which had been completely girdled for the distance of about two feet, I put a light, single covering of white cotton cloth, without any other protection. The tree lived through the season and bore fruit. The woody growth of the tree was very good, the twigs having extended from six inches to two feet, in the formation of a new growth. This spring, the tree puts out fair and bright, promising fruit, and yet there is not anywhere that I can see any connection of the bark, nor of the newly formed wood of last year. No new bark has been formed over the girdled part of the tree, nor is there any new formation of wood over that. The new layer of wood above and below the girdled part is of about the same thickness, and is about one-fourth of an inch in thickness. On some spots where the bark was not taken entirely off, but where it was taken off all around, there a new formation of wood is seen, but less in thickness than it is above or below the girdle.

I chose a clear white cloth in preference to anything else, because the white would reflect the rays of the sun, and therefore keep the surface from being much heated. I would not bind it on with any bandages, or strings, lest they should bind on the peeled surface too tightly; and therefore put the cloth around and fastened it with some small nails. The experiment is giving me much instruction as to the growth, maturity and life of trees. It teaches, I think, the following truths:—

1. That the life of a tree does not absolutely depend, for the time being, upon its having a covering of bark.
2. That the sap circulates in other ways than directly lengthwise of the wood.
3. That trees, which would otherwise certainly die, may be preserved in this simple manner, so as to give ample time to take other measures to preserve them completely.

How long the above named tree will live and grow remains to be seen.

Mason, N. H.

A. G. C.

COB MEAL.—MR. THOMAS MOTLEY, JR., of West Roxbury, says, in the *Boston Cultivator*:—I have fed out over five hundred bushels this winter to horses, working oxen, milch cows and pigs—in fact, I have used no other grain. My horses have never been in better condition than at present, and have worked hard all winter; they have been fed regularly upon the following feed: 12 lbs. cut hay and 8 quarts cob meal to each horse per day. Horses, oxen and cows are all in good

health and condition, and I should be happy to see any persons interested in agricultural matters, and let them judge for themselves.

For the New England Farmer.

SKETCHES OF TRAVEL.

FRIEND BROWN:—I am about taking a trip to Lancaster, Pa., and if any of your readers will run the risk of getting their heads broken by collision, or open draws, or from other infernal machinery, such as our railway managers know how to use, and seem determined to use, for the destruction of what few people remain, let them jump on and go along with me.

Well, here we are in the depot of the Baltimore and Susquehanna Railroad, leading to Harrisburgh, Pittsburgh and Cincinnati. Fare through *only* fifteen dollars! Think of that, ye "solid men of Boston," who want to go to the West by the safest and cheapest route, and see all the world and the rest of mankind.

The steam is up and we are off through the suburbs; no, I mistake. Baltimore has no suburbs. Out of the city and you are in the country, and a ratherish poor country at that. Those suburban villas and princely residences which cluster about the purlieus of some cities, are not found, but to a very limited extent, about Baltimore. It is much like the approach to Washington, where you grope your way for a long distance through a goose-pasture, till of a sudden you come upon a huge Dutch barn, with a cupola on it, which proves to be nothing less than Uncle Sam's capitol.

So, ho! what now? bridge gone, burnt down yesterday. Wonder they didn't run us all into the creek. After two hours detention, we are under way again. Here's Texas, not the "valley of rascals," though a *hard* looking place. It is built wholly of limestone and upon limestone. Houses, barns, fences, gardens and roads, all of the same material. The sole occupation of the people seems to be to quarry, burn and haul limestone. And, judging from the color of their dresses, one would suppose them also made of limestone. They have no visible means of support but upon limestone; and I know not but they substitute it for flour. Certain I am, that they breathe it, for they can't do "nothing else" while they remain there.

From these quarries comes a large portion of the lime used in Baltimore. It is sold at the kilns for three pips* a bushel. Look first on this, and then on that. This is the dividing line between Maryland and Pennsylvania. Geographers teach that mathematical and political divisions are merely imaginary. But in this case the dividing line is scratched upon the surface of the earth, so indelibly, that he who rides in the cars may see and perceive.

We Marylanders are loth to admit that slave labor curses the soil as well as the people. But facts are stubborn realities; and any one who passes from Baltimore to York, his eyes open, need not be told where the dividing line is.

Here is York, the shire town of York County, a right smart place,—population good,—well built, and a place of considerable business. It contains a poor-farm and an almshouse, where all the poor

* A "pip," is our four-pence, half-penny.

of the county are provided for. This plan has some advantages over that of town provision, adopted throughout New England. It equalizes the burdens, and probably lessens the aggregate expense.

We have the Harrisburgh road here, and turning eastward, go on to Wrightsville. This is a lumbering village, on the west bank of the Susquehanna, where the tide water and Susquehanna canal crosses the river. There are some large lumber mills here, owned by lumber merchants in Baltimore.

Wrightsville is connected with Columbia, by a bridge across the Susquehanna a mile and a quarter in length. This bridge is an object of some curiosity. It has two railway tracks, two canal tow paths and accommodations for public travel. It is said to have cost \$230,000.

Here we are in Columbia! Hail Columbia, happy land! what a passion we Yankees have for attaching big names to little things. Well, the names may haul them up and make them sound large, if they are not really so. Columbia is a great lumber land. Most of the lumber, cut upon the several branches of the Susquehanna, is hauled up at this place. Iron is abundant in the immediate vicinity on both sides of the river.

Several furnaces are in full blast. The population is about 6000, and rapidly increasing. We observe here, what is common in this State, and I believe, through the South. All marketing is done at stated times and in the market place. On certain fixed days, the buyers and the sellers congregate early in the morning, in the market-place, the one to be rid of cash, and the other of what they deem equivalents. I think this far better, for all concerned, than to have marketing dribbling along through the whole week.

From Columbia to the Gap so called, on the borders of Chester county, we pass through the most beautiful agricultural region I have ever seen. I have travelled in fourteen of the States and upper and lower Canada, but have seen nothing that will compare with Lancaster, for farming purposes. The land is gently rolling. No hills, no marshes. Most of the land cleared,—laid off with great regularity,—enclosed with high and substantial fences and under the highest state of cultivation. You might go over thousands of acres and not find a briar or bush, or useless tree. Every foot of ground seems to be made productive; such an exhibit of wheat, rye, oats and clover, I have never seen. Should a landscape painter color his picture so highly, as many of these fields appear to me, I should have accused him of extravagance. A New Englander, after passing through this region, will understand the meaning of the language so often applied to the land of his nativity, "rock-bound and barren."

Three reasons may be given for the fertility of these lands. The soil is *naturally* good. Where excavations have been made for the railroad, the grass grows up in few years and covers the slope down to the track. Indeed, the very track is completely turfed and produces grass abundantly. A gentleman who acted as engineer on the first road constructed through the county, remarked to me that the earth, taken from 15 feet below the surface, exposed for a short time to sun and rain, would support vegetation as well as the surface soil.

2. Lime is abundant and is freely applied. Almost every farm has a limestone quarry, and the making and applying of lime constitutes an essential part of the business of every good farmer.—Lime may be had at any of the kilns, for nine cents a bushel, and often for seven. This is spread upon the surface, at the rate of about 50 bushels per acre and plowed in. Once thoroughly limed, the land needs nothing more for many years, unless it may be a crop of clover.

3. The farmers here understand their avocation. The German farmers of Pennsylvania "can't be beat." They are intelligent, in their way, patient, industrious and economical. Their barns are models for imitation. The basement or cellar, of stone or brick, and is devoted to stabling and shelter. The second story, where the hay and grain are deposited, is approached by a causeway. Many are built entirely of stone; others have stone basements and brick above. The houses are generally large and commodious, and everything about indicates comfort and independence.

But these farmers have their peculiarities.—Among these, the Yankee would notice their teams. The Yankee wishing to remove a quantity of wood *draws* it. The Dutchman *hauls* it.—The farmer uses one horse or at most, two, or a pair of oxen, with a wagon or cart adapted to his team. The latter, hitches six horses, each as large as a small elephant and so fat as to be seemingly uncomfortable to a nondescript vehicle, resembling nothing of which we read in history, either sacred or profane, unless it be Noah's Ark on wheels,—the tongue projecting from 4 to 6 feet in advance of the heads of the wheel horses, and so low as almost to strike the ground, each horse having so much leather about him, as to render a fly screen unnecessary. He then mounts the near wheel horse and with one rein in his left hand and a short whip in his right, he cries out yea—aup.

Another peculiarity is the plow. The Dutchmen in plowing are all Benjaminites,—they turn the furrow to the left. The only reason I could get for this foible, is that they guide their horses with one rein; this is attached to the near horse, and if he is permitted to walk in the furrow, he needs less guiding from the plowman. A plow in common use there, is made of iron entire.

The price of land in this county answers to its quality; from one hundred to one hundred and fifty dollars per acre, taking a whole farm, the buildings included. I was shown a tract of 80 acres, without buildings, which was sold recently for \$140 per acre. At this rate, a farm of one hundred acres would bring the clever little sum of \$14,000. I was told by several farmers that, notwithstanding the good quality of their lands, farmers did not generally get more than three per cent. on the estimated value of their farms.

Labor is very high and difficult to obtain. The farmers say that the Legislature, in their zeal to protect and aid the poor, in other words, to be very Democratic, have legislated poor laboring men all out of the State. It is generally admitted, I believe, that the Pennsylvania Legislature, have for some years past been legislating for every body else, rather than for their own people. But I am spinning a long yarn, or plowing a long furrow, I should say, and against this, you cautioned your correspondents last week. But I suppose that was intended for proxy writers. Now I

am not prosy, not I. Did you ever know a writer prosy in his own estimation? All men think all men sinners but themselves.

Allow me to introduce one individual, to substantiate what I have said of the intelligence and shrewdness of the Pennsylvania farmers, and then I will break up. Col. Ringwalt, living near the R. R. Depot, at Downingtown, Chester Co., has a farm of one hundred and twenty-five acres, 25 in wood. Of that which is cleared, the largest portion is a pasture. He gathered last season, 75 tons of good hay. He might have gathered 150 tons, but he pastured a portion of his mow lots. He keeps a public house and entertains many drovers with herds of cattle and flocks of sheep. He harvested 1000 bushels of sound corn, getting from 60 to 90 bushels to the acre,—350 of wheat, and oats, and other small grains and roots in proportion.

He understands and practices thorough draining successfully. He showed me a tract of land which he purchased four years ago, for \$50 per acre. It is now worth, he says, \$100. But, he added, I will never sell it. When he purchased, the land was so wet, though upon a side-hill, as to be wholly unfit for tillage. It is now covered with wheat, rye and clover, better than any I saw elsewhere in the county.

He has thoroughly drained it, sinking his ditches, in some instances, eleven feet, so as in all cases, to arrest the water at the fountain. He fills all his drains with stones, arranging them at the bottom, so as to form a sluice for the water. The top he covers with straw, weeds or shavings, and that with earth. He allows no stones to remain upon the surface of his fields, or below it, within reach of his plow. He is not afraid to disturb the yellow dirt, but plows deep and subsoils. His rotation of crop is peculiar. He plants corn two seasons in succession,—then takes off two crops of wheat, then seeds to grass and mows from three to five. When he turns in turf, he plows but five or six inches. The second season he plows much deeper. The first crop of corn he depends mainly upon lime, spreading about fifty bushels to the acre. The second, he applies compost and barn-yard manure. After the second corn crop, he sows wheat and clover. In the autumn, after taking off the wheat, he sows plaster and turns in the clover and stubble and sows wheat and clover the second time. He thinks he gets more corn and more wheat the second crop than the first, and that the land is more thoroughly subdued and pulverized and in a better condition for grass. He slacks all his lime in salt water and spreads it and plows under, while smoking hot. This he regards as very essential.

Another idea which may be worth the attention of your readers. The Colonel makes great use of oyster shells, but says they should not be burnt. Burning destroys the distinctive properties of the shell. A burnt shell differs not essentially from stone lime, except that it contains a small quantity of phosphorous. But unburnt, in addition to what it contains when burnt, there is found in it a large quantity of animal matter which is highly nutritive to plants. He dries them by exposure to the sun, then grinds them in a plaster mill and applies them as he does other mineral manures.—He is careful to save all the liquid manures of his barn-yard, and keeping the ground covered with

sand, loam, muck, saw-dust and other absorbents. In answer to my inquiry how he made his apple trees grow so fast and look so clear and thrifty, he replied, "Keep them limed and washed with soap suds."

Now, Mr. Farmer, have not I established my position? Yankee farmers are cute chaps, and can do most things as well as any body else. But they need to be cautioned now and then, lest they come to think that they are the people, and all wisdom touching the matter of tillage will die with them.

Yours,

Z. B. H.

FLOWMAN'S SONG.

BY THE "PESANT BARD."

Sweet are the fields where the clover is springing,
And lilthe is the carol that floats from the bough;
And soft vernal breezes a gladness are bringing
To cheer me as gaily I follow the plow.

Though hard be my toil, and dew-drops of labor
Make damp the brown locks that encircle my brow,
No envy I feel for my ease-loving neighbor,
For pride more is mine, as I follow the plow.

The lordling may boast of his titular story;
The vote seeking grandee obsequious bow;
What care I for all their nonsensical glory?—
A NOBLE OF NATURE, I follow the plow.

I muse upon those, while turning the furrow,
Who, called like Elshah, are glorified now;
Tho' hand delve in earth, yet the mind need not burrow,
But spring to the light, as I follow the plow!

Connecticut Valley Farmer.

For the New England Farmer.

STATE FARM AT WESTBOROUGH.

MR. BROWN:—As model farms and educated farmers are prominent topics of consideration at the present time, may there not be propriety in instituting the inquiry, as to the management of the State farm at Westborough?

If rightly informed, there is a farm of about two hundred acres, as well situated for cultivation and improvement as any other in the Commonwealth. There are several hundred boys, between the ages of twelve and twenty years, healthy, vigorous and able to work; in need of instruction, *how to work*. There are means of expenditure at command, to sustain any and all reasonable experiments. Why not put this farm under the care of a man, able and competent to conduct such experiments? Would it not be for the benefit of the boys to be thus employed? Can they not be made to contribute something towards their own support?

It is stated by Dr. Bell, of the McLean Asylum, that the *thirty acres* of land connected with that institution yielded, the last year, a clear profit of \$1400—or more than \$46 per acre. Suppose fifty acres of the land on the farm at Westborough to be put under cultivation, with crops of vegetables at a profit of \$40 per acre—would not this be an item worthy of consideration? If I do not mistake, there are those who would undertake the management of these lands, and guarantee this income, if they could have the use of classes of these boys, *six hours in the day, for this purpose*.

I hope that this matter will be looked into by some one competent to judge, and that the State farm will be found worthy of the State of Massachusetts.

May 18, 1853.

For the New England Farmer.

OLD APPLE TREES.

Reading the advice in the May Calendar to graft old trees, I thought of some trees in the neighborhood which had undergone that process, and wished the editor had appended to his advice a rap over the knuckles of such as follow it so badly.

Old trees of quite a decent and respectable figure in their native state, are sometimes converted into a mere collection of bare, crooked limbs, with brushes on the ends, perhaps improved in fruit but an eye-sore and a nuisance to all who love to see the fields adorned with fine trees as well as fruit. There is no need of the trees remaining in this awkward fix—the old branches, it is true, must be grafted near the ends, but a multitude of suckers always spring out lower down, and in trimming some of these should always be left in the right places to bring the tree into good shape. In two or three years they will be large enough to graft.

I once had half a dozen old trees headed down in order to graft entirely on the young sprouts. Two of them were sawed off near the parting of the limbs, leaving but little beside the bare trunk. On the others the limbs were left six to ten feet. The sprouts came out abundantly, and in due time were grafted and trimmed. It is now three years since they were grafted, and I find the trees which were headed down close have done much the best, and make the handsomest trees, the grafts growing most thrifty and less troubled with suckers from the old wood.

BACHELOR.

May 18, 1853.

RULES FOR THE APPLICATION OF GUANO.

As guano is now extensively used as a fertilizer, and is constantly coming into the hands of those who have little or no experience in its application, everything calculated to aid the inexperienced will be acceptable. Indeed, inquiries are constant with regard to the quantity proper to be used per acre, and the best modes of application. In addition, therefore, to what we have already said in relation to it, we give below certain rules laid down by A. B. ALLEN, Esq., of New York, late editor of the *American Agriculturist*, a gentleman who is able to speak from actual experience on the application and effects of this important manure.

We have appended a few notes at the close of his rules, calling particular attention to some points of his circular, and have somewhat changed the order of his arrangement.

The rules are worthy of attentive consideration.

VALUE.

Guano is valuable for every kind of soil, except that which is already very rich, and to every kind of field and garden crop, grass, grain, vegetables, fruits and flowers. The reason it is so serviceable to all, arises from the fact of its containing every kind of food necessary for the growth of stem, flower, fruit, and seed. The eminent chemist, Dr. Jackson, of Massachusetts, says: "It comes nearer to a UNIVERSAL COMPOST than any other excremental manure."

Guano is particularly valuable for conservatories and gardens, inasmuch as it is quickly and easily applied; its fertilizing matter is in a very condensed form; and it contains no seeds of weeds to shoot up and check the growth of plants desired to be cultivated. Its fertilizing properties being in a very condensed form, the whole cost of enough for an acre and its application, is frequently less than the cost of mere transportation of city or barnyard manures to the ground where they are to be used. This is a very important consideration to the farmer, and especially the gardener.

PREPARATION.

Before using guano, pass it through a fine sieve, and all lumps remaining break up, and these pass through the sieve. Now take at least four times its bulk of sand, or dry sandy, or light loamy soil, and pass this through a coarser sieve, if you have one, and mix it in layers with the guano. Let this compost lie a few days—several weeks would be better—(a.) then toss it over and beat it up well together, and it will be fit for use. Some prefer mixing the guano with ten or twenty times its bulk of soil for a compost, and do not take the trouble of sifting it, but mix them together in alternate layers as well as it can be done with a shovel. Sifting, however, is best, as it is done so much more evenly. Sawdust is an excellent material with which to mix guano; but powdered charcoal is perhaps the best of all, as it fixes the ammonia, absorbs its unpleasant smell, and is in itself an excellent manure. When convenient to be obtained, plaster of Paris ought to be used in the compost, at the rate of 30 to 50 lbs. for every 100 lbs. of guano, as it also acts in the same way as charcoal. Lime and ashes must be avoided in composts, as they rapidly expel the ammonia, the most valuable part of the guano. Muck, if possible, should not be used for the compost, as it is too moist and tenacious to form a proper mixture. (b.) The same objection holds good against clay or any tenacious soil. Nevertheless, if there be no other soil at hand, muck or clay may be thoroughly dried and pulverized, and then used. Guano should not be mixed with barnyard manures, or indeed with any moist substance, as these cause it to undergo the very decomposition requisite to promote vegetation. The compost should be made under cover unless the weather be dry. Rain would be quite injurious to it, in hastening the decomposition of the Guano, and expelling its ammonia in the atmosphere.

QUANTITY REQUIRED PER ACRE.

This depends upon the kind of soil and its condition, and the kind of crop to be grown. From 250 to 400 lbs. of guano per acre is the safest quantity to apply. It acts quickest in a light sandy soil or loam, and is excellent to start crops on cold, moist land. It hastens the ripening of crops on all kinds of soil.

Take Particular Notice.—In speaking below about applying a tablespoonful, or any other quantity of guano, we mean that amount, without admixture; if mixed with four times its quantity of soil, then it would require five tablespoonfuls of this compost to be applied to get the single one of Guano, &c.

GRASS AND GRASS LANDS.

Spread broad-cast, from 250 to 400 lbs. per acre, mixed in a compost of earth of about four to

one. As soon as the snow is off the ground and the frost begins to come out, is the best time to apply it. Another application of from 150 to 200 lbs. may be given in midsummer, directly after the first mowing. *Care should be taken to do this just before a rain.* (c.) Grass lands may be top-dressed in the fall; but in that case, much of the Guano is likely to be washed off by the heavy rains and lost. We recommend applying it at the rate of 200 to 300 lbs. per acre, on land just seeded with grass. This should be done just previous to harrowing and rolling.

When sward land is to be plowed for a crop, it may be top-dressed with Guano previous to plowing, and then be turned under the sod. It will warm and hasten the decomposition of the sod, and afford food for the crop about the time the grain or fruit is filling, and thus add largely to the product.

WHEAT, RYE, BARLEY, OATS, &c.

On winter wheat and rye, spread broadcast from 200 to 300 lbs. of Guano, per acre, just before the plant commences growing in the spring. If applied in the fall, unless on *very poor* soil, it is apt to give the crop too rank a growth before winter sets in. On spring wheat, rye, barley, oats, &c., spread the same quantity at the time of sowing, and harrow it in with the seed. If this be not convenient, it may be applied within a week or fortnight after the grain appears above ground. Caution must be used about applying too much on the small grain crops, otherwise it will be likely to promote too rank a growth and occasion smut.

INDIAN CORN.

For this crop, Guano may be spread broadcast upon the land, the same as for wheat; but it is better to apply it directly to the hill. Hollow out the hill with the hoe, put in about a tablespoonful of Guano, cover it over one and a half to two inches deep with soil, and then sow the seed and cover up. If the corn be sowed in drills, furrow out lightly with a one-horse plow, then apply the Guano as in hills, and cover it with the hoe or other implement. At the first time hoeing, put double the above quantity of Guano around the hill, and hoe it in, taking particular care that it does not touch the stalks, otherwise it will be very likely to kill them. If this can be done just before a rain, so much the better. Some apply Guano again just as the corn is ready to tassel and fruit, but we should hardly think this necessary, except in very poor soil. If more than the above quantity be applied to corn, it must be planted extra wide apart, otherwise the growth will be so large as to make the stalks and leaves intermix and produce smut.

Potatoes, Tomatoes, Sugar Cane, Tobacco, Cotton, Cabbage, Cauliflower, and some other crops, may be treated nearly in the same manner as corn.

PEAS, BEANS, TURNIPS, BEETS, CARROTS, PARSNIPS, AND ONIONS.

If these are sown broadcast, apply the Guano in the same way as directed to wheat; if in drills, as directed with corn, except it might not be best to cover the Guano with over one to one and a half inches of soil in the drill, and then sow the seed.

ASPARAGUS AND CELERY.

It is a good top-dressing for these early in the spring.

MELONS, CUCUMBERS, SQUASHES AND PUMPKINS.

Treat to Guano the same as corn, in the hill, allowing an even tablespoonful for each plant to be left to run to vine.

STRAWBERRIES, RASPBERRIES, CURRANTS, GRAPE-VINES,

And indeed all fruits, may have Guano dug in about the small roots, early in the spring.

APPLE, PEAR, PEACH, CHERRY, PLUM, QUINCE, AND OTHER FRUIT TREES.

Guano not only adds to the size, and fair, plump appearance of all fruits, but is said to increase the delicacy of their flavor. It should not be applied around the *body* of the tree unless it be a *very small* one, but to the extreme ends of the roots, otherwise it cannot be absorbed, and of course will be nearly all lost. Roots of trees spread under ground about the same distance from the trunk, as the branches do above ground. Let the soil be well trenched from one to three feet wide, according to the size of the tree, directly under the circle formed by the ends of the branches, and the Guano then be incorporated with the soil, within a few inches of the top of the rootlets; it will thus find its way to their mouths, and as it decomposes be taken up in the sap for the benefit of the tree and its fruit. If applied later than May or June, it will make a large, soft, spongy, growth of *unripened* wood of no value whatever.

STEEPS AND LIQUID FOR WATERING PLANTS.

For one pound of Guano use 5, 10, or even 20 gallons of water; or at the same rate for a smaller proportion. Stir it up well and cover over the vessel tight, so as to prevent the escape of the ammonia, and let it remain from one to three days before being used. Now water *around* (not *upon*) the plants as occasion may require. If this liquid touches the plant, it is apt to burn it. Previous to watering, stir the earth well around the plant. One pound of Guano for 20 gallons of water may be thought to make a very *weak* steep for watering plants, but such is not the fact; we have seen the most surprising results from watering with a steep no stronger than this. Some of our friends last year steeped their corn and other grain in this liquid, from 3 to 25 hours previous to planting.—It came up unusually thick and grew very rapidly. For steeps we would recommend 10 to 20 gallons of water to each pound of Guano, using the latter quantity for the more delicate seeds. It is so powerful a substance, there is great danger of its killing the embryo of the seed, if applied in too strong doses. The phosphate of lime and magnesia in the Guano are insoluble in water; the sediment therefore is valuable to spread on the land.

TO THE LADIES.

Guano is very easily applied by you, and in the neatest possible manner, to your conservatory and garden plants. Purchase a neat keg of it containing about 60 lbs., have a hole bored in the head, into which insert a stopper. Now place the keg on its side as if to draw liquor out of it. Then as often as you wish to use the Guano, take out the stopper and draw out what is necessary from the keg with an iron rod flattened and slightly crooked at the end. Now make a liquid of it as described above, or with a trowel, dig a small quantity of it in the earth, around the plant. This, says Mr.

Teschemacher, must be done before the plants form their full-sized flowering buds, otherwise they will begin to make new shoots, the buds will be left behind, and the flowers will open with *diminished beauty*. Be very careful not to let the Guano touch the stems or leaves of your plants, otherwise it will be certain to *kill* them.

A bouquet of flowers may be preserved a long time in water, by adding a very small quantity of Guano to it as often as renewed. A quarter of an ounce to a quart of water would be sufficient. It might be well also to add a table spoonful of pulverized charcoal at the same time.

CAUTION IN APPLICATION.

Be very careful to place the Guano so that it will not touch the embryo, or young roots, or stalks of corn, potatoes, cabbages, tobacco, sugar-cane, cotton, or any plant that has but one stem from its root; for it is of such a burning nature, that if a portion no larger than a small pea comes in contact with the plant, before being watered or rained on, or undergoing partial decomposition, it instantly kills it. (d.) With grass and small grains this caution is not important, as other shoots from the roots will immediately supply the place of those killed.

DESTRUCTIVE TO INSECTS.

That Guano is destructive to insects may be proved by any one disposed to make the experiment. Take insects and put them in a saucer or bottle, and sprinkle a little Guano on them; or mix up a tablespoonful of Guano in a gill of water, and pour this liquid upon the insects. It will be found to kill the smaller ones almost instantaneously, and the larger in one to two hours time.

ANALYSES OF VARIOUS GUANOS BY EMINENT CHEMISTS IN EUROPE.

	Peruvian.	Chilian.	African.
Ammoniacal salts,	83 to 40 pr. c.	13 pr. c.	23 to 28 pr. c.
Animal matter,	5 to 7	3	5 to 9
Salts of potash and soda,	8 to 12	8	9 to 11
Phosph. of lime,	23 to 28	53	30 to 37
Magnesia and Oxalate of lime,			
Water,	10 to 13	22	18 to 25
Sand,	—	2	—

ANALYSES OF VARIOUS GUANOS BY DR. CHILTON, OF NEW YORK.

	Peruvian.	Chilian.	African.
Phosphate of lime,	26.82	52.55	38.00
Ammoniacal salts,	46.43	3.16	23.94
Oxalate of lime,	5.44	—	—
Phosph. of magnesia, ammonia,	2.00	—	—
Carbonate of lime,	—	8.12	—
Chloride of sodium,	.51	5.36	4.17
Sulphate of potassa,	—	4.41	—
Sulphate of soda,	—	—	—
Silica,	1.23	16.22	.58
Alumina, &c.,	—	—	—
Undetermined organic matter	5.45	3.88	15.26
containing nitrogen,	12.10	5.20	19.05
Water and loss,	100.00	100.00	100.00

REMARKS.—(a.) We should prefer mixing the guano and applying it immediately. Though mixed with five or six parts of loam, more than its own bulk, it is still in quite a concentrated form, and would give off considerable ammonia. But if mixed and immediately applied to the soil, whatever is given off will be arrested by the soil of the

field into which it has been intimately incorporated.

(b.) Muck that has been dug for a year and left lying in a heap will form one of the best materials for an absorbent as well as a distributor. It is not so moist as to be tenacious, or sticky, but sufficiently so to receive the escaping ammonia.

(c.) Guano should always be used in a moist state. For flowers, a few beds of vegetables, or a few favorite trees or shrubs, or for a small garden, borders, &c., it is better to dissolve it. Put a quart into a barrel of spring, river or rain water, stir it well and water at evening through a water-pot.

(d.) This is an important caution. There have been instances where corn has been dropped on the guano and came up well; but this must have been owing to fortunate circumstances. Where a copious rain immediately succeeds the planting, the guano would be likely to get leached, and thus prevent injury to the corn. To be safe, the guano should be mixed with the soil on which it is dropped. This may be readily done with the foot before dropping the corn.

For the New England Farmer.

DURATION OF POSTS.

The result of forty years experience and observation, with me, is that common fence posts set in the ground green, and butt end downwards, will last, in a sandy loam, about 10 or 12 years. The same set in a like situation, inverted, will last 15 or 18 years. The same timber, (and soil the same,) well *seasoned* before setting, will last 8 or 10 years longer. I speak of good white chestnut or white oak.

Timber cut in the old of the moon in February, will not be eaten by worms, will not snap in burning, and will last much longer made into posts than when cut at any other time. I have chestnut and white oak posts standing well that were set 28 years since.

Westboro', April 4, 1853.

OTIS BRIGHAM.

FEEDING TEAMS.

All cattle should be fed regularly, and about the same quantity given at each feed. If from a change of weather or any other cause the appetite becomes a little dull, take away from before them what is left, and leave the place clean and sweet. If oxen or horses are to be put to work at 7 o'clock in the morning, they should begin to feed as early as five, and will require an hour or more to eat. If extra feed is to be given, as C. O. proposes, such as carrots, it would be better to give it at night, after the animal has enjoyed an hour or two of rest. C. O. will observe that it is the nutritive properties of the food assimilated and sent through the system that gives the animal strength, and not the undigested mass in the stomach. A little rest after a hearty meal is always conducive to comfort and health.

PLAN AND DESCRIPTION OF A PRIMARY SCHOOL HOUSE IN EXETER, N. H.

FRONT ELEVATION.

The school-house, of which the foregoing out-
presents a somewhat incomplete view, was built
under the direction of H. F. FRENCH, ORIN HEAD,
and J. G. HERR, after designs drawn by the latter
gentleman. It stands back about 60 feet from the
street in the midst of a half-acre lot, and is sur-
rounded and ornamented with trees. In respect
to style, construction, convenience of internal ar-
rangement, elegance of finish, furniture, means of
ventilation, as well as amplitude of grounds, it
may be pointed to as a model. It is 26 feet by
34, and 13 feet high in the clear. The pitch of the
roof is 29 degrees. The windows are hung with
weights and shaded with Venetian blinds. The
walls are beautifully papered and ornamented
with busts and casts. As a substitute for a rick-
ety, rattling black-board, the end wall by the
teacher's platform is plastered with a mortar of

lime, cement and lamp-black, with an outside
coat of stucco as hard as marble, and as black as
the three bad boys that St. Nicholas dipped in his
ink-stand. Over the teacher's platform there is a
ventilating trap-door, opening by cord and pulleys
into the attic. The attic is relieved of the vitiated
air, thus constantly rising into it, by means of a
copper ventilator on the roof.

The abbreviation marks on the plan may be ex-
plained as follows :

A, School-room, 25 feet by 25, besides the re-
cess near the chimney, containing 62 arm-chairs,
with book and slate-racks attached. The chairs
are made for comfort, and are fine specimens of
workmanship from the manufactory of W. G.
Shattuck, Boston.

B, Recess back of the stove, 6 feet by 2½, fin-
ished at the top with a Gothic arch.

C, Broad steps under the porches, defended by
balustrades.

D, Entry for boys, about 12 feet by 7½, furnished
with hooks for hats and coats.

E, Entry for girls, about 12 feet by 7½, furnished
with hooks for bonnets and cloaks.

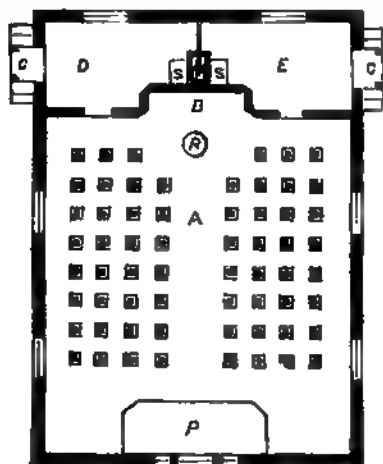
F, Flue, 12 inches square, plastered smooth in-
side.

G, Additional flue of the same size, built in case
it should ever be deemed advisable to "annex" an-
other school-room.

P, Platform for teacher, 10 feet by 5, elevated
8 inches, and provided with one of Shattuck's
desks.

R, Register for the admission of pure air.

The building is raised about 5 feet, and windows
are left in the underpinning under the porches, so
that the air, which ascends through the register
into the school-room, comes fresh from the out-
door world. The stove stands over the register ;



PLAN OF FLOOR.

the cold air, therefore, when admitted, clings, as a matter of natural philosophy, around the hot stove, until it is warmed, and then is drawn over the children towards the ventilator at the other end of the room.

S, Sinks in the entries, provided with pails, dippers, wash-bowls, towels and a *looking-glass for the girls*.

As an item of special interest to small districts in country towns, it may be added, that *the whole expense was just \$1208.73*. This includes not only the house itself, but also the grading of the grounds, the planting of several hundred trees, the construction of tasteful fences and necessary out-buildings, together with \$300 paid for the lot.

For the New England Farmer.

PATRONS—PATRONAGE, &C.

MR. EDITOR:—In the last *Farmer* there is an article on "Inquiries and Censures," by JOHN WILCOX, and some editorial remarks attached. Mr. Wilcox says "farmers ought to know the truth, as far as possible. If deceived by those to whom they look for correct information, they are under strong temptations to withdraw their patronage, &c. To this you add in substance, "Then the word patronage, as used in this sentence, is not known to us. We have no patrons. When the reader of the *Farmer* thinks he does not get an equivalent for his money, we advise him to seek some other source of benefit. So long as we have hands and feet, and a modicum of sense to guide them, we shall have no patrons. The farmer has his customers for his wheat, corn and cattle, and the printer his for the articles he has to spare, but they are neither of them patrons."

We have often heard "editors" revert to their subscribers in this same way before; yet we never could see the force of the argument, nor can we see it yet in that light. As we see the subject, every subscriber to a paper is a "patron" to all intents and purposes, whether he gets the full amount of his money, or more or less, as the case may be. But if we understand the editor, what he means by a patron, is one who does a piece of work, or favor for another, without any stipulated sum to be paid. Or one who does a piece of work gratuitously for another or makes a donation for a certain object. But I presume we cannot have better authority on this point, than Dr. Webster himself. He says that a "Patron is one who countenances, supports and protects, either a person or a work," &c. And of "Patronage," he says, "Special countenance, or support, lend or aid afforded to second the views of a person to promote a design," &c. Now if any subscriber to a paper or book does not countenance, support and aid the works they pay for, then what do they do? It must be plain as noon-day, that every subscriber to a paper is a real patron in the right sense. So is every customer of the farmer for his produce, a real patron. Of course every subscriber to a good paper, will get his pay, and he may get it in a single number. But this fact, to our mind, does not make him any the less a real patron, by no means. But suppose the paper should fall below par or "mediocral," and

yet the subscriber would continue to take and pay for the paper, as long as published, whether it was worth half price or not, what then? Would he, then, and then only, be considered a patron, or would he not be as much a real patron when the paper was in its palmy days.

The plain truth is, we as men are so selfish, that we are not willing to give half as much credit to our fellow-men as we should do. "For instance, we have been trying for the last twelve years in our plain way to stimulate the farmers to greater effort and exertions to improve themselves and the soil. This we have tried to do in various and several agricultural journals in the States.—And so far as asking any pay in dollars and cents, we have oftentimes found it hard to get a hearing at all, though all done gratuitously on our part.—This we call real patronage for the press, and editors and publishers may call it what they please. And yet it is not bound up in so close quarters as this even. For it is more on the liberal scale of getting good, doing good, and communicating to others. Every gratuitous correspondent to an agricultural journal can testify to the same thing. What would an agricultural journal be in this age were it not for the help of its numerous correspondents? More than nine-tenths of all these must come from gratuitous writers. Yet, in ordinary journals, it is only a few such as "sub or associate editors" that can be paid for their time. We will just say for Mr. Wilcox that the "Prepared super-phosphate of Lime" is not manufactured at New Haven, Ct. But it is kept for sale there, by Munson & Johnson, of the agricultural store, 49 State Street. Yours, &c.,

L. DURAND.

Derby, Ct., May 5, 1853.

REMARKS.—It affords us pleasure to know that our readers are so watchful of what is said in the columns of the *Farmer*; that Argus-eyed correspondents watch its expressions and weigh its sentiments. A kind correction of our errors can do us no harm, and may be of considerable public benefit. We had rather supposed that the common acceptation of the meaning of the word was that the *patron* had the gift, or disposition of some special benefit, some special countenance or support. The word is never applied, we think, to the butcher, the baker, mechanic or tradesman, in the sense in which friend DURAND uses it. But if its meaning is generally accepted, according to his explanation, we have no objection to it as used in Mr. Wilcox's article.

SULLIVAN CO. AGRICULTURAL SOCIETY.—At the Annual Meeting, holden March 10, 1853, of the Sullivan Co. (N. H.) Agricultural Society, the following gentlemen were elected its officers for the ensuing year:—

JOHN S. WALKER, Claremont, President.
CHARLES E. WHEELER, Newport, Secretary.
JOHN H. HIGBEE, Newport, Treasurer.

THE BIRDS.—Attention is called to another of the delightful articles of Mr. FOWLER, upon the Birds of New England.

For the New England Farmer.

"EXPERIMENTAL FARMING."

Messrs. Editors:—Finding in one of my weeklies an article under the significant and attractive caption, "Experimental Farming," copied from the *New England Farmer*, I felt moved—by the spirit of controversy—to "also show mine opinion." The comparative allusion the writer makes is well calculated to gain him a hearing among some classes of persons who in too many instances are already behind the times in agricultural science. Since he made the allusion I will remind him that one noted in olden time for his wisdom and extensive observation once remarked, "He that is first in his own cause seemeth just, but his neighbor cometh and searcheth him."

Your correspondent strikes his first blow at scientific farming on this wise—mark the expression: "The chemist may analyze the soil on my farm . . . and point out the ingredient or ingredients which are wanting, theoretically, and I go to work, practically, and find my land unproductive as before." This may be so, is not always satisfactory to those who understand the use of figures. In the *Working Farmer*, Vol. 3, No. 2, Prof. Mapes writes, "Within the last three years we have visited many farms, and some of the owners sent certificates of results." One represented that under our advice he had added the missing constituents to his soil, at an expense of only \$4.12½ per acre, with proper tillage, and produced, in consequence, the following crops:—Corn 128 bushels of ears per acre, where formerly with much larger expenditure for manures, but 30 bushels of shelled corn had been produced. Potatoes, 310 bushels per acre. Mangold wurtzel 16 tons per acre, and other crops in proportion. Had your correspondent cited an instance where a person having an analysis of his soil by a competent chemist—had added the required amendment—as in the instance above quoted, and failed of satisfactory results, I might have remained silent; but he does no such thing; he only gives his ipse dixit, and goes on to prove from his *practical experience* in well-digging that soils are so variable even within short distances that an analysis must be of doubtful utility.

Of his first well, he states: "after removing the soil at the surface we entered a quicksand &c.," of the second, some fifty feet distant, he continues: "after removing the soil we came upon hard compact clay gravel," &c. and closes the sentence with the remark, "here was an illustration of the change in soils worth noticing." Here is an illustration of the way some people jump at conclusions, unparalleled in my previous reading. I had always supposed that the portion of the earth's surface through which the plow passes, into which the manure is worked, and to which the seed is committed, is the *soil*—proper—the part that chemists and agriculturists had most to do with, but your correspondent having removed this in both instances without noting any difference, has seemed to entirely lose sight of it, and digging down into the *sub-soil* and not finding the bowels of mother Earth perfectly even and uniform, he announces the discovery of a principle in agriculture that is likely to baffle the combined skill of chemists and farmers in their attempts to improve our system of husbandry.

In perfect keeping with his conclusions, he re-

fers to the course of practice of a self-constituted physician as an example worthy of imitation by farmers in their treatment of infertile soils. Suppose he should find a quantity of sulphuret of iron conveniently near his compost heap; we should expect, according to his own recommendation, to find him—following the example of his model doctor, carting it in for the improvement of his farm.

Would not it be strange if it did not benefit some portion of his changeful farm? Again, suppose he wished to ascertain whether his soil needed lime—for instance; would he procure a quantity and compost it with numerous vegetable and mineral substances, and if his crops were benefited by the application of such artificial manures, continue year after year to add lime to his compost in the belief that it is the required amendment?

J.

P. S.—The above was written before receiving the March number of the *Farmer*, which contains your remarks showing some of your objections to the recommendation of your correspondent, which the paper in which I first read the article did not copy.

I find too in the same number another correspondent seems to have doubts as to the practical benefit of analysis of soils. He says, "Is it possible that by careful analysis of soils from sterile Mass., and of those from the Scioto valley, famous for its wonderful fertility, no clue to the vast difference between the two can be detected?" "I here confess my surprise at the results, and will acknowledge they have done much to shake my faith in all chemical analysis of soils."

I would inquire if the specimen of soil from Hampden Co. is a fair representative of sterile Mass. soil; also what is the average produce of the Hampden Co. soil. "Having witnessed the growth of corn in both States," has he found out no difference in the geological character of the different places, nor found any difference in mechanical condition? Has he taken into consideration the difference in latitude, temperature of climate? &c. Has he read Prof. Johnston's lecture on the Relations of Physical Geography to practical Agriculture?

Bridgewater, March, 1883.

J.

For the New England Farmer.

RURAL PLEASURES.

There is, perhaps, no situation in life which affords greater facilities for enjoyment than that of the husbandman. Exempt from the many cares which throng the pathway of the professional man, the farmer finds ample opportunity to cultivate his mind and expand his intellect, and even while engaged in labor, may still be a learner from the great book of Nature.

As the plowshare turns the sods, his eye wanders over the rich landscape, and in the meandering streams, the wood-crowned hills and smiling vales, he traces the finger of God. The glory of the spring-time is not by him unheeded. He sees with delight the delicate verdure mantling in beauty the awakening earth—he views with pleasure, the fair petals of innumerable blossoms as they unfold to the genial sunbeams, and he feels upon his cheek, the soft breeze which is laden with their balmy perfume. For him, the minstrels of heaven

have a song of joy, and all nature seems hymning an anthem of praise. Gladly the farmer greets the spring-time, and with a light heart prepares his fields, and sows the tiny seed, which will yet yield a glorious autumn offering. No feverish excitement disturbs his placid life,—no wild dreams of fame and glory—no ambitious schemes, whose bright hopes gleam for a space, then fade in darkness away. His course is before him—simple and plain—peace and contentment are the inmates of his breast. Day after day beholds him at his healthful toils, and fortune smiles upon him. His table boasts few foreign luxuries, but plenty is ever there, and the viands produced by his own care are partaken of with a relish which the epicure might envy. Home is to the husbandman a delightful spot. Care flees from his fireside, and the evening hours are spent in calm converse or innocent glee. When night's sombre curtains unfold the earth, he finds a sweet repose, for toil has lent "a blissful rest to slumber."

How many young men who now forsake their rural homes and seek the crowded city, would escape the snares of the tempter and shun the cup of sorrow, if they remained upon the peaceful farms of their fathers.

R. C. L.

Lebanon, Vt.

WITCH GRASS.

There are few spurious productions characterized by a more invincible tenacity of life than witch grass. When it has once become thoroughly radicated in the soil, it is almost impossible to get rid of it. Some writers who appear to be impressed with the idea that no human effort is competent thoroughly to cleanse lands which have become fouled by its presence, recommend cultivating it as hay; but we can contemplate witch grass in no other light than that of a most troublesome and exhausting truant, and one that the farmer cannot do better than to keep at a distance, let the expense be what it may. That it makes a most excellent and nutritious feed for stock, when cut early and properly cured, admits not of any doubt; and we are far from denying that there are any circumstances in which it may be advantageously and profitably cultivated, as for instance, on soils of a low description, where the surface is somewhat soft, and which are otherwise constitutionally incapacitated for tillage. In such situations there is at least a strong probability that its introduction would be attended with success. But no farmer who understands its nature, will ever be seduced into the practice of sowing witch grass seed on lands intended to be cultivated subsequently. The well-known difficulty attending its eradication, will operate on most minds, as an efficient caution in this respect. Indeed, every one who appreciates easy and thorough cultivation, will guard against its propagation and spread as much as practicable. In light soils, of a rich and warm character, the labor of exterminating it—unless extra means are resorted to—is usually the labor of a life, and we can now point to many fields

in which sufficient extra labor has been performed in consequence of the usurpation of this pest, to purchase the soil twice over, and yet the crop is more luxuriant and vigorous than it was when attention was first directed to them. The roots of this grass are very strong and numerous, they are also remarkably tenacious of life, and unless they are removed from the soil *entire*, this may be a temporary abridgement of the evil but no permanent cure. Some gardeners, when this pest has become radicated in their soil, cover the surface with boards, and allow the land to fester a year. In this way it is suffocated, and is probably more easily destroyed than in any other way. The loss of the year's crop is of trifling consequence, as the presence of the witch grass would render the expense of cultivating it too great to allow of much profit, even under the most favorable circumstances.

When a soil can be covered for two successive seasons, in this way, the eradication is thorough, generally speaking, and with proper care in the after cultivation it will rarely be restocked. Salt, in large quantities, will destroy witch grass; but the amount required for this purpose renders the undertaking expensive, especially if the soil is deep, rich and mellow, as in such cases the roots extend to a great depth, and generally numerous, vigorous and strong. It propagates mostly by its lateral roots, and when allowed to grow, generally produces a medium crop for two years; it then begins to dwindle, the stalks become annually thinner and less numerous, and it finally "runs out," although upon plowing and manuring the land, it always reappears and flourishes as before.

The best and cheapest way we have found to exterminate this grass, is, to plow deep, pulverise finely, and then with a rake and the hands gather up the roots and cast them away, or burn them. Then with a three-toothed cultivator, the teeth being ten or twelve inches long, go over the ground thoroughly, which will bring up a still further portion, which must be gathered as before.

In this thorough manner we have cleared an acre in a single season so as to find little trouble from it afterwards. Harrowing, raking with the spring-tooth and the independent acting rakes, have proved utterly futile with us in collecting these grass roots.

Harrowing late in autumn, after the ground has been frozen, and thawed again two or three inches in depth, is said to kill the roots by turning them out and exposing them to winter frosts.

CURE AND PREVENTIVE OF THE POTATO ROT.—Mr. H. Penoyer, of Union county, Illinois, publishes in the *St. Louis Republican* his experience and success in preventing the potato rot. He has tested his preventive for four years, with perfect success, while others in the same field who neglected it lost their entire crop. It is asserted, also, that the root is nearly double the size. The remedy is as

follows: "Take one peck of fine salt and mix it thoroughly with half a bushel of Nova Scotia plaster or gypsum, (the plaster is the best,) and immediately after hoeing the potatoes the second time, or just as the young potato begins to set, sprinkle on the main vines, next to the ground, a table spoonful of the above mixture to each hill, and be sure to get it on the main vines, as it is found that the rot proceeds from the sting of an insect in the vine, and the mixture, coming in contact with the vine, kills the effect of it before it reaches the potato." Mr. P. asks nothing for his discovery beyond what those who are benefited are willing to give, and he desires a test to be made before an opinion is formed. This is reasonable, and the experiment costs so little that it is worth testing.

For the New England Farmer.

THE FARMER'S CABINET.

The field of science which invites the farmer to investigation is a boundless one. The atmosphere, the earth with its rocks and plants, its animals and insects, and immense variety of soils, are all intimately connected with his success in his profession. All farmers, who have for a length of time cultivated the earth, may be supposed to have some knowledge in all these matters, for observation, however blunted it may have appeared, will sometimes be in action, and when allowed to exist, practical benefits will result.

Now one of the benefits we claim as resulting from farmers' lyceums, beyond that furnished by the library, with its shelves filling with scientific works, got up by individuals who have closely investigated the subjects on which they treat, and by the means we have proposed, bringing the fruits of their researches within the means of all who desire the benefit of them, is that by these social gatherings of exchange of thought, the result of the observations of the many become the common stock of all. So, then, if under certain circumstances, Mr. A. has seen things different from their presentation to Mr. Y., it is seen at once, that individual observation has not been pushed to its full extent, and then the opinion of each, being contradictory to the other, though each may have been right under the circumstances, not only they will enter the field with new zeal and fresh hopes, but their conflicting opinions will draw others into the same work,—the curiosity will be excited, investigation will follow and facts demonstrated which to them might have forever remained mysteries.

To aid in these investigations and to make all certain that things are called by their right names, we would have well selected cabinets connected with all these institutions.

First, we would have a cabinet of minerals. Soils consist to a great extent of the disintegration of rocks, and minerals are the representatives of these rocks. Now the wearing down of mica slate does not produce a soil like that of limestone origin, nor do the different varieties of limestone produce a soil alike in its proportions. But variety is found to exist as often as the composition of rocks changes. Consequently, the productive power of the soils vary. Their character, to a great extent, may be determined by the character of the principal rock, and so when the field is dis-

tant, by a specimen of the rock we may approximate towards the quality of the soil. So then, we would have a mineralogical cabinet connected with the farmers' lyceum. And this should in no way be confined to fragments of rocks themselves; but should embrace, as far as possible, the different varieties of soil made up from these rocks.

Then we would have a botanic cabinet. Here we would have well prepared specimens of all the grasses and grains fit for cultivation, neatly arranged in their different species and varieties, so that the young farmer could mark at once their peculiar features and see the difference they present in their different stages from wild growth to the most successful cultivation. In addition, let such plants as experience has proved to be noxious to the farmer's interest, have a place here, labelled as such, to warn the unwary and inexperienced of the danger of admitting them to his grounds.

If specimens of different varieties of wood, with the leaf and seed, were added, it would give additional interest and open a beautiful field of study to the young mind. Then we would have a cabinet of insects, each labelled strictly with its good or bad qualities. Many of these are fatal pests to the farmer, yet how little does he know of their general character! How few of them can he recognize by their countenances, much less can he call by name when he meets them. In short, so great has been his indifference in the matter, that probably not one in fifty of the farmers of New England can distinguish his friends from his foes in the feathered or the insect races. Hence, it is no wonder that he often sacrifices the former and gives countenance to the latter. His ignorance in the matter leads him to do it and suffer the losses that too often result. And yet who is to blame for this ignorance, when he every day is holding communion with nature in all her works, and each day furnishes some leisure moments when he might investigate the things that surround him in the air above and the earth over which he walks,—when science is opening her rich store-house and inviting him to come in and take liberally of her treasures.

We have thus glanced hastily at what we would have a farmers' lyceum cabinet contain of natural history, to which we would add works of art, such as drawings and models of implements, paintings of animals and fruits, and indeed everything that can interest, enlighten and please the farmer's mind and keep it in vigorous and healthy action. And here we submit the query, if there was a place in each town or even in every county like the one we have briefly sketched, would not its influence on agriculture and the rural arts be of a salutary and progressive character! Under such circumstances, with the facts drawn out and placed before their eyes, would not farmers see at once, that science in beauties and its practical influence was for them, and instead of encouraging their sons to leave the plow and the scythe to engage in other professions in hope of greater glory or gain, would they not see a field of ambition and reward open here, more than large enough for all their claims! And young men, too, would see the bright destiny that was inviting them upward and no longer pant for the renown of counter jumpers or seek professions of uncertain success, feeble in-

dependence, and have no greater demand on intellectual progress than their own.

We hear objections to the plan we have proposed. The ghost of some old Hunks is whispering in our ears that we have laid out too much work. It *can't* be accomplished without serious interference with the more important object of getting "*the dollar*,"—the almighty friend of ignorance and parsimony. We do not despise "*the dollar*," but wish we had enough and to spare to many such institutions. It would be a bright investment. But we insist upon it, that man is endowed with too high faculties to be borne down by the grovelling demands of pecuniary gain. He has intellect to appreciate nobler objects than bags of gold or large domains,—a mind that can expand through infinitude, and not only drink in pleasure from all the fountains of nature and art, but can turn the waters of those fountains through the elevated regions of taste and refinement to increase, beautify and variegate the products of the earth, and make cultivation a delightful toil.

It *can't* be done. Individuals have their libraries, not only in other professions, but in the agricultural, and as long as this is the fact in cases of men whose business occupations are making continual drafts on their time, often bringing toil and fatigue in times when they anticipated leisure, cannot associated effort accomplish the same object? Especially, cannot farmers in whose ordinary pursuits the very elements, with whose power he should be familiar, throw obstacles to labor do as much?

It is an age when much, very much is saying and doing on this matter of agricultural education; yet, after all, but very little progress seems to manifest itself in the matter. Thus far we may infer there has been more wind than rain in the strong flow of words that have been uttered on the subject. The wind will ere long pass away, and then we hope farmers will take hold of the subject themselves, assert and defend their rights—take the position that God has given them, and resolve that they will be an intellectual and a highly educated class. When they do this, success hitherto unknown, will crown their efforts. W. B.

Elmwood, Feb. 15, 1853.

For the New England Farmer.

THE SEASON.

MR. EDITOR:—The season up here in the Old Granite State, is about four weeks earlier than it was last spring. The farmers have commenced plowing and sowing a little, and will finish most of their spring sowing in the course of ten or fifteen days. Winter grain looks as well as it has any spring for several years past. There being no frost in the ground, the grass is quite green as soon as the snow is gone. The sugar season was not as good as it was last by full one-third. I think that we shall have hay enough in this section of the country, as the season is so far advanced that the cattle are out to grass in some places.

SAMUEL L. POWERS.

Cornish, N. H., April 15, 1853.

SPENT TAN BARK.—The *Pa. Farm Journal* tells of a successful application of tan bark, made by mistake to a portion of the editor's garden. He ordered a certain part to be well spaded and ma-

nured for beans, but the gardener dug up another plot and applied a heavy coating of pretty well composed tan bark. The soil was a stiff clay, and no other manure was applied or had been to this bed for several years previously. The beans were planted and were the most thrifty and vigorous in the neighborhood, and the stiff soil has become quite mellow, and appears to retain its warmth and moisture much better than any other in the garden.

For the New England Farmer.

INSECTE—PLUM-TREE WARTS.

The depredations of insects upon fruits and vegetables may sometimes prompt the farmer to wish it were in his power to exterminate their whole race. But, as the Creator has granted every green herb for food to "every creeping thing," no less than to fowls and beasts, as well as nobler man, and has effectually secured them from any such sad doom, we must content ourselves to be fellow-commoners with them, despite all we may wish or do. The fruits, flowers and plants which we claim as exclusively ours, they emphatically declare, by unmistakable deeds, are no less theirs; for hate and fight them as we may, they will live, beget their progeny, and eat freely what they like, find it as they may, in the prince's or the humblest cottager's enclosure. Choicest fruits, sweetest flowers they love, as decidedly as man. Do they invade our *rights*? Not so; they claim instinctively, only their own. A vast family is supplied from the same bountiful hand, and it would be wise for the agriculturist to reflect more upon obvious facts, in the providential arrangements established between him and inferior orders of animal existence.

Suppose all insects that annoy us and prey upon fruit trees and cultivated plants were extinct. Then what would become of the birds? They would be robbed of their appointed food, and starved, and their matchless, wild music would greet us at our hard toils no longer. What solitude, amid the luxuriant vegetation, and bright suns of summer! Say you, be it so! Our fruits and grains are safe, from these vile foes. Patience, friend—think again, what result would follow even as to these. Not a blossom or germ would be attacked, by a marauder, and all of them would be left to live or die as they might, in unimpeded development. Think you that your trees would be sure to cast off all the superfluous fruit, and reserve only a quantity which they were capable of well sustaining, and bringing to perfection? Not so; they would be over-loaded, and your fruit would be smaller and of inferior quality, and at the same time the trees would be greatly exhausted, and perhaps rendered shortlived, by overtasking their vital powers. Their wood and branches must grow annually, and be sustained by the same stock that yields the fruit, and in due proportion to the general demands upon the trees for maturing their present fruit, and preserving their vigor and health for subsequent years. Many lessons the Ruler of Nature teaches us, which through inattention we are wont to overlook. If animals need rest, and can endure only a given amount of labor, why should not fruit trees follow the same law, and be relieved of the excessive burden they would be destined to bear, without that kind of pruning, for which certain insects are employed? Let us not

say, then, that they are altogether pernicious, when we see our peach branches sure to break down without props, or unless much relieved of their burden by our own hands, and when we may be sure a superabundant and imperfect fruitage would load our orchards, if no worm-eaten apple were dislodged from their branches.

As to plum tree warts, my conjecture is, that as they have not, so far as I know, been proved to be produced by insects, they arise from the want of the healthy deposition of the woody fibre, and that this may result from obstructed circulation of the sap, this being caused by deficiency of one or more ingredients in the soil. Impeded circulation of sap may cause an accumulation of it in particular places, there forming the warts. If the conjecture should be well founded, the desideratum would be to ascertain what to apply to the soil around the tree, to promote free circulation of the sap. I desire vegetable physiologists to cast light upon the subject if they can; if such is the disease, what is the cure? We would refrain from constant amputation of the trees, if a better course can be prescribed.

A young seedling peach tree began last spring to send out long, curly, misshapen leaves, on certain branches, and where these grew, the branches were distended, grew crooked, and stopped extending themselves. Free application of urine to the root was followed by their recovery and healthy growth. Hence I surmise that as the disease of the peach tree yielded to this application, the same, or phosphate of ammonia, or phosphate of lime, might have the like effect upon the plum tree. But fair experiments are better than conjectures or surmises.

Salisbury, Conn., Feb. 8th, 1853.

P. S. Feb. 9th. Since writing the foregoing remarks, my conjecture as to the cause is much strengthened, by examining two warty twigs from a neighbor's plum tree. I have wanted a lens however, to enable me positively to decide whether there are any traces of a minute insect's work. Two holes through the black coating of the largest wart I traced with my knife carefully, and some evidence of the dusty gnawings of a worm was indicated for some distance, and a minute trace of his course seemed discernible. Yet if a worm had been at work, he might have sprung from an egg deposited in the wart while young and growing, and not be the original cause of it. The other twig presented no discoverable symptom of this kind. The diseased growth encompassed the twig half round, the distance of about two inches in length. It is evidently a *fungus formation*, shooting in layers from the wood of the twig, and extending sometimes nearly to its pith. A little below the wart, the early stage of the disease is seen, indicating that the bark had first cracked open along the twig, and then exudation of sap had formed an incipient wart firmly attached to the wood beneath. The healthy deposit of woody fibre beneath the bark gives place to this curious exhausting malformation, whatever may be the peculiar predisposing cause. The knobs and wens on oaks possibly are of a similar character, especially those found at times, upon their smaller branches. The exuding gum of peach trees seems incapable of producing a like effect, yet it extends disease beneath the bark, by being forced out of

its appropriate course. So, also, I find the inner bark of the plum twig diseased some distance below the wart. What I have thus stated, even if I have formed a wrong opinion, may awaken investigation, and perhaps result in a clear explanation of the subject, by some pen more competent to the task.

J. L.

For the New England Farmer.

MONTHLY FARMER FOR APRIL.

Did you ever write an article for the *Farmer*, several pages of fair, legible manuscript—(of course you would send no other to the printers, as an honest man you would not, for they earn a living by their profession, and when obliged to "take" bad copy they lose time, patience, and money, too, almost as directly as though it were "picked" from their pocket by the careless writer; and not only do they receive all such excuses as "in haste," "no time to re-write," "excuse my scribbling," &c., most ungraciously, but they do sometimes say hard words, very hard, about the writing and the writer; no, you never sent any such!)—but as I was about to inquire, did you not experience something like disappointment when you saw how small a space your article of several sheets of letter-paper occupied, when printed? I have felt so myself; and this has set me a-thinking of the mass of manuscript required to fill up a single number of the monthly *Farmer*, which consists mainly of original matter.

But the amount is not all; look a moment at the variety of the "pile" of brain-dust that is monthly coined into a circulating medium, at this one mint.

Besides all that is written by the editor, including reports of over fifty speeches or remarks at agricultural meetings, and replies to some ten or fifteen correspondents, by initials, in various parts of the country, and a few choice selections, we find, in the April number, in the order of its pages, articles on various topics, from gentlemen who have "subscribed themselves" as follows:—

(no signature)	Silas Brown, Wilmington.
F. Kyle, Chester Village.	B. F. Conant, Lyme, N. H.
Henry F. French, Exeter, N. H.	S. F., Winchester.
G. B. Clarke, Leonardsville.	H. D. W.
E. C. L., Lebanon, Ct.	G. B. Green, Windsor, Vt.
Solon Dyke, Columbia, S. C.	J. W. Proctor, Danvers.
Bachelor.	John Brooks, Princeton.
Bowen Barker, Hanson.	J. Reynolds, Concord.
J. F. C. H., Newton Centre.	A. G. Comings, Mason, N. H.
Benjamin Willard, Lancaster.	John Merrill, Bristol, N. H.
W. D. B., Concord.	J. W. Proctor, Danvers.
E. Scott, Ludlow, Vt.	Young Farmer.
W. Clift, Stonington, Ct.	S. Tenny, Lewiston Falls.
W. B., Elmwood.	J. W. Proctor, Danvers.
B.	J. Reynolds, Concord.
L. S. H., Northampton.	J. A. S., Colebrook, Ct.

One or two thoughts are suggested by the foregoing list.

First, that mere initials deprive an article of much of that force and reliability of character, which the name in full, and place of residence, of the writer, confer upon his production.

Secondly, that the names enumerated show the impropriety of holding the editor responsible for all opinions that may be advanced in the columns of the *Farmer*. One would suppose that the printer sufficiently distinguished the editorials from the communications, and both from the selections, to prevent doubt or confusion. The editorial is always "leaded," by which the lines are so separated as to give it an open appearance, while the

lines of all other articles are "close" together. At the head of each communication is this announcement, "*For the New England Farmer*;" which is as much as to say, "this article was written for, not by the *Farmer*, and therefore the responsibility thereof belongs to the writer," whose name, or "mark" at least, is appended. As to selections, we find their source or "credit" distinctly given.

While some readers confound or overlook all these distinctions, and regard the *Farmer* as an indivisible whole, for which the editor alone is responsible, there are others who do understand them, but hold that the editor ought not to allow space to be occupied in the propagation of what they regard as heresy. Alas, poor human nature! That same old leaven which fermented society when the Copernican system was announced, when the first saw-mill was mobbed out of England, when men sneered at Fulton's steamboat, still lurks in the whole lump of humanity; so that the editor of the *Farmer*, in the number before us, finds it necessary to announce, in a note to his account of a Legislative Agricultural Meeting, that "the reports of agricultural discussions at the State House, give opinions for which we feel no sort of responsibility. This is the case with communications which we publish." And why should you? Who ever thought of holding the President of the Senate, the Speaker of the House, or the reporter of either body, responsible for the opinions stated in debate by the members? Why then the editor for those of his correspondents, so long as they do not transgress the "rules of order," which he should see to it are always observed?

The importance of the utmost freedom of discussion on the subject of American agriculture, must be an apology for these remarks. In our efforts to build up an *American system*, we may find it necessary, to pull down some of the principles of the European one brought over by our fathers. We have not only to establish principles, but to root out prejudices; not only to learn things new, but to unlearn time-honored practices. One of the committees of the Massachusetts board says: "We are practising on principles and theories originating in a country, in some respects widely different in climate, soil, products, and the social condition of its laboring population. In England the farmer has to guard against excess of moisture; here he has to guard against the want of it. There, land is dear and labor cheap; here, labor is dear and land cheap. Yet our agricultural works are mostly of English origin." We need, therefore, a system adapted to our situation. The exercise of our own eyes, experience, and judgment, is required, in its construction; and a pretty large margin must be allowed for the various opinions of those who are heartily engaged in this great work. The principle that holds correspondents amenable to editors, would hold the editor, also, responsible to some "higher power," and must result in nothing short of that censorship of the press which has always checked progress and improvement, and bound the people to ignorance and servitude. How disastrously this principle would affect the character of the *Farmer*. It would destroy that independence, freedom, originality, and spirit, which now mark every page, and give interest to the whole.

Make the editor, or any one of his correspon-

dents, responsible for all the opinions advanced in the *April Farmer*, and what a fluttering there would be among the "articles" of which it is composed.

Notwithstanding, for instance, that the editor has often expressed his belief that "successive improvements" have been made in plows, on page 158, "*Bachelor*" is allowed a "confab," in which preference is expressed for one 20 years old, and the "cold shoulder"—a habit of all bachelors—is given to modern "improvements."

On page 168, the editor gives tables, from various analyses, of the nutritive value of roots compared with hay; by which it appears that 1000 parts of carrots contain about the same amount of nutritive matter as 1000 parts of herds-grass, or 2000 parts of clover hay. Yet on page 183, experiments are given which place the value of carrots at "between one-third and one-half that of good English hay." On page 195, Mr. Clark estimates the cost of dressing an acre with barn-yard manure at \$42, with guano only \$7.50; yet the editor finds it necessary to caution farmers against a "guano fever," and recommends it only as an adjunct.

Similar instances, to almost any extent, might be adduced, but the foregoing will suffice. Truth, not agreement, should be the object sought. "Many men of many minds," is an old saying; and all the inquisitions, racks, censures, and spies, yet invented have failed in making men think, speak and write alike. As we have done, so let us continue to do—"agree to differ;" and each one bear the responsibility of the reasons given for the faith that is in him.

Having said thus much in relation to the *April Farmer*, in general, we have space for but a few remarks upon the articles in particular.

The suggestions in "the calendar for April" respecting plans, would furnish woof for the whole web of a volume. Who can give a better statement of the difference between great men and little ones, than that the one can, and the other cannot, form distinct plans of action?

Until "*New England Housewives*" bemoan their lot as they "compare their state with the imaginary comfort" of those who have slaves

———"to fan them while they sleep
And tremble when they wake,"

it may be unnecessary to discuss further this forbidden topic, especially as it would seem that those who "love" slavery are already engaged in "combatting" and "exhorting" "matrons" at home.

"*Shell Lime*."—The writer, or printer, has put an extra "bushel of salt" into the directions for preparing this article. Has this composition been tried extensively?

"*A New Grass*."—We have here a very sanguine recommendation of a new grass, particularly for light soils, which the writer obtained from a single plant found among turnips raised from English seed. The committee on Farms of Worcester Co., who examined this grass, is rather less sanguine than Mr. Willard appears to be. On the pine-plain pasture, they found "much white clover in blossom, and some of the brome grass." As hay, they speak of it as "coarse," and reserve their recommendation of its general use until a "jury of cows" shall have passed upon it. (*Trans.* 1851, p. 153. Is it not time this verdict should be rendered?

"*Influence of Newspapers.*"—Mr. Brown gives us a lecture here, that ought not to be forgotten. "Can a man take fire in his bosom and his clothes not be burnt?" Can the family read some papers weekly, and correct notions of life not be destroyed? When farmers complain that their sons leave for the city, and that their daughters prefer the factory or shop to a good home, I feel curious to learn the character of the newspaper they have provided for their children.

"*Farmers' Libraries,*" recommended for neighborhoods. I like the suggestion of the editor that town libraries be supplied with agricultural books. So far as possible the established and endowed institutions for education, and all the usual means of improvement at command, should be made available for the advancement of the agricultural interest, instead of looking for new and untried schemes.

"*Legislative Agricultural Meetings.*"—With this number of the *Farmer* in our hands, we can sit by our own fire-side, and "hear" the discussions at four of these meetings; when "Farmers' Institutes," "Fruit Trees," and "Manures," were debated. Few of us can go to Boston and attend these assemblies; the editor therefore gives us full reports of the sayings of our wise men.

"*Agricultural Mass Meeting.*"—The discussions and speeches on this occasion, judging from the reports here given, were of rare variety, and ability—the man of science and the rigid practical man, met face to face, where

"Mind with mind did blend and brighten."

on such topics as farm buildings, stock, education, root crops, manures, &c., &c. The remark that we cannot "re-produce stocks [of cattle] imported, any more than we can breed Englishmen," and the reply of Mr. French, furnish texts for thought, and, I would suggest, for dissertations. "Although we are from the same stock, we are not Englishmen." Is not the difference alarming? What mean the sunken cheeks, depressed chest, round shoulders, projecting head, decayed teeth, pre-ternatural bright eyes, and sickly countenance, that distinguish the American everywhere?

"*The farmer with two ideas,*" by the author of "Eating their bodies up," articles on "Grafting," on "Forcing Vegetables," "Benefits of Associated Efforts," "Ornamental Trees," "Experiments with potatoes, as to manure, time of planting, seed," &c., and a great variety of other instructive and interesting articles, that fill up this number, have as little need of my recommendation as I have space in which to give it. I wish, however, just to ask the boys if they read the last article in their department. Who will read it again, and look out for "number one," by heeding its suggestions.

Winchester, April, 1853.

SCYTHES FASTENINGS.—Every thing that tends to facilitate the business of haying, if it does not come at an extravagant cost, is desirable. Labor is always high during that busy period, and the crop is of such a nature as to depreciate rapidly if not gathered at the proper moment. We want not only good tools, but those that are not easily liable to get out of order. The scythe is the important implement at that time. We notice a new way of

securing the blade of the scythe to the snath, by passing its shank through the end of a stationary metal cap, and securing it by means of the upward pressure of a screw. This invention is by Mr. ALFRED KIMBALL, of Fitchburg, Mass., and it seems to us to be a decided improvement over any other mode we have seen.

For the *New England Farmer*.

INQUIRIES AND CENSURES.

MR. BROWN:—I notice in the *New England Farmer* an advertisement for super-phosphate of lime—a chemical compound, said to be very useful as an application to crops of different kinds, on light, loamy soils. It is offered for sale in bags or barrels. Its price is not stated, by the pound or hundred weight, which is a great defect in the advertisement. (a.)

No common farmer can with safety purchase this, without knowing its price, and its fertilizing qualities, and how to apply it, and in what quantities. If he should, without any experimental knowledge of his own, or directions from others who might know, he would suffer a loss in proportion to his outlay; and thus his prejudice against book farming and agricultural papers be increased. (b.)

Is it not the duty of an editor of an agricultural paper, when he inserts a notice of a new fertilizing substance, to state its price and what he knows about it, and how it is to be applied? (c.)

Farmers ought to know the truth, as far as possible. If deceived by those to whom they look for correct information, they are under strong temptations to withdraw their patronage. (d.) The truth should be told and all known facts stated, and if the farmer suffers loss, he has no one to blame excepting himself.

There are humbugs in agriculture, as well as in politics; and if editors of agricultural papers give them their sanction, they do an essential injury to the cause they profess to aid. (e.)

It is not intimated that the *New England Farmer* is of this character; its editorial, and other articles, are of practical utility, but its advertisement in relation to super-phosphate of lime needs explanation. Is this as good as that manufactured at New Haven, Conn., styled improved super-phosphate of lime, and sold at two and a half cents per pound by the quantity?

JOHN WILCOX.
Newport, N. H., April, 1853.

REMARKS.—We give all concerned, readers and advertiser, the benefit of friend WILCOX's communication, as well as to afford us opportunity to say a word of the relation which exists between the publisher and advertiser.

(a.) It seems to us that advertisers, as a general thing, would find customers more readily and save themselves unnecessary vexation and expense, by stating the price in plain terms, of the commodity they wish to sell. And in regard to special manures, no farmer in the possession of his senses would think of ordering them before knowing their cost. He is, in the first place, obliged to write and ascertain what the price is, and then, if

it suits him, write again to order the article.— This causes unnecessary delay and expense.

(b.) If a farmer hasn't a head of his own, and will not think and investigate for himself, he has no cause to blame the books or newspapers. He should not go into large outlays for manures or any thing else upon the declaration of any book or newspaper in existence. Let him begin moderately, "try all things and hold fast that which is good." There are so many varying circumstances, that no set of rules will be applicable to all farms. The cultivator must learn this, and then exercise his own judgment, after such discussions with his neighbors as he may always be able to have. As a conductor of a public journal, we feel bound to give our best energies to the work in which we are engaged; mind and body, and if need be, a portion, at least, of our estate. No part of life ever found us a more ardent student than in your service now; no heart beats more responsive to the calls that come up from every part of the land for "more light," in the great art which sustains us all. This application of the mind, together with the daily application of the hands to the cultivation of the soil, ought, and does give us confidence in a great many particulars in relation to the art. But after all, we are fallible, and mean to be cautious.

(c.) No! A skilful chemist and practical farmer, for instance, states that he has prepared a valuable fertilizer, and desires to make it known through the columns of the *Farmer*. Are we bound to refuse him that right until we have experimented on his article two or three years, or incurred an expense of \$25 to procure a chemical analysis? Certainly not. The advertising department is out of our province. We sometimes refer to advertisements when we are confident the article spoken of is worthy public attention; beyond that, we have nothing to do, confident that the publishers will admit nothing having an immoral tendency, or in any way injurious to the public welfare. Our correspondent is referred to another article in this number signed "A Reader."

(d.) We agree with the general proposition of this sentence, but its connection is unfortunate. Because we refrain from speaking of an article advertised, it cannot by any fair process of reasoning, be supposed that deception is intended. Then the word *patronage*, as used in this sentence is not known to us. We have no patrons. When the reader of the *Farmer* thinks he does not get an equivalent for his money, we advise him to seek some other source of benefit. So long as we have hands and feet, and a modicum of sense to guide them, we shall have no patrons. The farmer has his customers for his wheat, corn and cattle, and the printer his for the articles he has to spare, but they are neither of them patrons.

(e.) This, too, is correct doctrine, but placed in juxtaposition with foregoing remarks, admits of different constructions. But the premises being wrong in supposing that we are bound to approve or condemn whatever may be found in our advertising columns, the deductions that follow are also wrong.

We wish this matter understood. Unless we approve an article advertised, the fact that it appears in the columns of the *Farmer*, is no evidence of commendation from us. The article in question, super-phosphate of lime, has been spoken of by others, in our columns, and analyses have been given by distinguished chemists which we will insert. The price of the super-phosphate is about \$55 per ton.

GRECIAN FARMERS.

Professor Felton, of Cambridge, is delivering a course of lectures at the Lowell Institute, in this city, on "Life in Greece." From his third lecture, as reported in the *Traveller*, we take the following interesting description of rural life among the ancient Greeks.

The love of rural life was one of the deepest passions of the Grecian heart, beyond the realm of Arcadia, real or ideal. What lovely touches of nature adorn with their exquisite beauty the dialogues of Plato and even the comedies of Aristophanes. Through the whole compass of Greek literature, the sights and sounds of the country, the sweet, calm sunshine, the fleecy cloud, the song of the lark and the nightingale, the rising sun, the rich meadow, the cattle feeding in the pastures, furnished thoughts which moved harmonious members. When the Peloponnesian war opened, the plains of Attica were covered with residences, elegantly furnished, which the inhabitants with regret and tears looked back upon from the walls of the city, while the Spartan armies were laying all waste with fire and sword. The country was tastefully decorated with little temples or chapels, consecrated to the nymphs and rural deities; and the lands were made holy ground, because in them were buried the ancestors of the families residing in the mansions.

The Greek gardens were laid out with lawns, groves, thickets and avenues; while fountains fed meandering rivulets. Beds of asphodel, hyacinth and violets, roses, myrtles and pomegranates, diversified the scene, or wafted perfume to the senses. Here Athenian taste and luxury displayed itself. The Greek as a farmer or city gentleman, is not the Greek of classical associations; and yet, perhaps, just in these relations, he was most intensely Greek.

Homer gives a lively sketch of the primitive country life. Hesiod was a Boeotian farmer, and gives precepts which seem to have been drawn from his own experience, concerning lucky and unlucky days, weather, &c. The early Greek philosophers carefully observed the phenomena of the heavens, and were skilled in the arts of the seasons. The habits of animals, the properties of soils and their adaptation to different kinds of crops, were matters of which they knew. Wagons, carts,

plows and harrows were manufactured on the farm or in its vicinity, and the wood used was chosen with care. Corn was ground in a mortar with a pestle, and in later times in a mill. The list of other implements, such as scythes, saws, spades, rakes, &c., could hardly be extended now. The use of guano, sea-weed, and commoner substances, was perfectly understood. Land was allowed to recover its strength by lying fallow. Scarecrows were set up in the fields to scare away birds; though a "spell" was also used, viz.:—having caught a toad they carried him around the field by night alive, and then put him in a jar, sealed him up, and buried him in the middle of the ground; when, this representative enemy being buried, the seed was supposed to be safe from enemies. The value of hay was well understood. The time for mowing was carefully determined, and the hayricks made with due precautions against both damp and spontaneous combustion. When the time of harvest came, the laborers of Athens ranged themselves round the agora and waited to be employed by the farmers.

The grain was separated from the straw by horses, oxen and mules, in a circular threshing floor, usually placed on an eminence in the open field. A pole was set up in the centre, and the cattle fastened to it by a rope reaching to the circumference. They moved round it until they were brought up at the centre by the winding up of the rope, and were then turned in the opposite direction till it was unwound. Sometimes a rude threshing machine, toothed with stones or iron, or a flail, was employed. In Homer's time a winnowing machine was used also. When the harvest was completed, the event was celebrated by a festival in honor of Demeter and Dionysius, at which cakes and fruit alone were offered.

The culture of the vine was a subject of importance, and the selection of a spot for a vineyard, the direction of its exposure, the effects of climate and of particular winds, were sedulously considered. Hedging, weeding, setting out slips, the treatment of the vine were all described by writers before the time of Virgil. The appearance of a vineyard, composed of tree-climbing vines, is beautifully described by Mr. St. John, the trees being ash, poplar, maple or elm, and planted one row above another on a declivity, with the lower branches cut off; the vine climbed thirty to sixty feet, according to the depth of the soil, and running out on the high branches arched from tree to tree, or on bridges of reeds.

A series of lofty arches was thus created, beneath which the breezes could freely play, abundant currents of pure air being regarded as no less essential than constant sunshine to the perfect maturing of the grape. The fruit was kept frost or made into raisins. It would be endless to attempt a description of all the fruits and the methods of raising them. Cider and perry were made from apples and pears. The olive was perhaps most extensively raised, as its oil was used for lights and as the basis of cookery.

The farm yards had their noisy tenants. Geese and ducks often waddled into the kitchen, in one corner of which might be heard the comforting sounds of the occupant of the pig-stye. The art of enlarging the goose's liver for epicures was well known both to Greek and Egyptians. Henecrys, furnished with roosts, were attached to the kitchen

so as to received its smoke, which was supposed to be agreeable to barndoor fowls. Pigeons, peacocks, pheasants, guinea-hens, &c., were to be found at the establishments of wealthier farmers. The laboring animals were much the same as now, except that the horse was comparatively more uncommon in the working of the farm, being reserved for the chase, war, &c. The arrangements of a Greek dairy were much like ours, and though butter was little used in the classical ages, yet cheese was universally eaten, generally while fresh and soft. Milk was sold in the Grecian markets by women, and it frequently reached the customer in the shape of milk and water. A method used for detecting the cheat, was to drop a little on the thumb-nail; if the milk was pure, it would remain in its place,—if not it would flow away.

SOIL—TEMPERING THE SOIL.

The character of the soil, by which we mean its capacity to afford a habitation to the plant appropriate to it, and at the same time to furnish the required aliment, is a matter, as all farmers must see, of the first importance. What are the requisites to a soil of this character? and how shall they be supplied, when wanting?

The soil should be such as to afford sufficient moisture to the roots and to admit the air to penetrate it freely. The soil consists of decayed vegetable matter, sometimes mixed with particles of rock reduced to fine pieces by the action of the atmosphere and of water, and sometimes by the roots of plants. It is unnecessary to describe the different kinds of soils in regard to adaptation to this object of supplying moisture; second, it should afford a supply of carbonic acid. This is furnished by the decay of vegetable matter, or by absorption from the atmosphere. This faculty of absorption is assisted by mixing charcoal, gypsum, or other matters having a great absorbing power. Charcoal has a great power of absorbing this substance, and it has been found that plants will grow more luxuriantly in this than in any other soil, if well supplied with water. The benefit of the charcoal or gypsum is only as a medium of absorption; the fertilization is derived from the water, which is converted by the plant itself, in its vegetable laboratory, into carbonic acid. Third, the soil should be capable of furnishing a supply of ammonia to the roots. This also is much assisted by gypsum and charcoal, which absorb it from the atmosphere. The usual mode is by addition of animal matter from the stable. Nitrogen imparts ammonia to the plant, and it is to this last that the nutritive power of the cereal grains and esculent vegetables is owing.

Fourth, it should contain those mineral ingredients which are necessary to the growth of plants. These, if wanting, must be supplied. The usual mode of doing this is by the mixture of other soils. This is also advantageously resorted to when the soil is too little or too much retentive of moisture

in consequence of being too loose or sandy or calcareous, or too compact and stiff. This is called tempering the soil. When a soil is too loose and porous, or too stiff, the mixture of the opposite kind in just proportions will bring it to a more suitable condition. In this way a body is given to those lands that are deficient of it, and those which are too heavy and tenacious are made more light and loose. This process brings no nutriment to the plant directly, but only mediately by attaining a retentive power in the right degree, and thus furnishing nutriment by a proper supply of water; and it also acts favorably on the health and quality of the plant. Irrigation is the most beneficial mode of applying water to plants, for the reason that in running over the ground it takes up and holds in solution the mineral matters required.

For the New England Farmer.

MANURES.

Many a farmer possessed of acres of cultivated land, which in its present state is a source of neither pleasure or profit, is convinced of the necessity of increasing its productiveness, but is in the dark as to *how* the work is to be done.

He may be unable to purchase specific manures; or from the many in general use, not know which to select. Or—as many have done—he may have erred in applying foreign fertilizers. Perhaps gypsum, sown on low, wet land, proved less valuable than sand from the wayside; and guano, placed in the hill, killed the young corn.

Now, to all who, in the use of specific manures, have failed to reap the anticipated reward, we beg leave to speak of a way, in which your farms can be made more productive, and that, too, at a very trifling expense. And the expenditure is an item which should enter the account of every farmer, for economy is essential to prosperity.

And first—*your barn-yard*, in which, perhaps, for want of a cellar, all your manure is thrown to be dried by the sun, and drenched by the rain, till little is left, except the worthless vegetable fibre, with which to dress your soil. Cannot something be done here? As it is, it may be the highway or the brook receive the liquid manure, for which your fields are languishing. And is not the air, for rods around, surcharged with ammonia, which conduces to the destruction of animal life, instead of contributing to the support of the vegetable kingdom?

Why not drain that unsightly bog, or dig the turf from beside that wall, where brakes and briars grow, deforming the whole field; and cart the sods and muck to your yard? The muck and loam may be of little worth if spread upon your land in their crude state; but incorporate them with your manure heap, and they become valuable by absorbing what now escapes.

And your *pig-stye*? Is it not a fit companion for the barn-yard? Is it not often flooded with water? Does not your hog, for want of better employment, undermine his fence, and break forth from his enclosure, to the serious injury of the garden or corn-field?

Give your hog plenty of leaves, potato-tops, and grass sods, and his labor will be turned to some

account. He will earn you from ten to twenty dollars in the course of the season, and in the fall fill just as large a barrel, as if he had spent his life in idleness or mischief.

But perhaps you say, “the substances above spoken of, as materials from which to manufacture manure, are worthless,—that spread upon the field they will not increase the crop.” In their present or natural state they may be indifferent fertilizers; and so is hay, before eaten by stock, and wood, before reduced to ashes.

Chester, April 18, 1853.

For the New England Farmer.

THE CURRANT BORER.

Mr. Editor :—There is an enemy of the horticulturist which is very destructive in these parts, and as I have reason to believe, is not unknown elsewhere, although I have not met with a notice of it in your valued periodical. I allude to an insect known as the currant borer. Forty years ago, there were luxuriant crops of most excellent currants produced in this neighborhood, almost spontaneously. At the present day they cannot be obtained of good quality by any degree of trouble and attention. This change has been brought about by the borer, a worm or rather maggot, very similar in size and appearance to the apple worm, which also has long been destructive to the produce of our orchards. For neither of these pests is any available remedy known; nor is it probable that any will be discovered, until the nature of the insects be sufficiently understood.

Possibly some of your contributors may be able to impart the requisite knowledge of their origin, and of their habits during the several seasons of the year. Independently of its effects, the currant worm is only known to me by observation, when pruning the bushes in the spring. I find the stems and branches hollow, the pith being destroyed, and a black powder occupying its place; while at the termination of the hollow part, and sometimes at each end of the tube, a white maggot, of half or three-quarters of an inch in length, occupies the place of the pith that has been consumed.—There is generally perceptible a small puncture in some part of the twig, by which it would appear the worm made its entrance; but whether it eventually drops into the ground, or undergoes its transformation into a fly within the twig, or what description of fly it becomes, are points that have not been ascertained, and which it is evident must be determined in order that a remedy may be applied with reasonable hope of success.

The same uncertainty rests upon the proceedings of the apple worm. Impressed with the idea that the worms, on their exit from the apple, entered the earth, I caused sea-weed to be laid under the trees, early in the summer, to the depth of a foot, and extended it over all the ground near the trees, and allowed it to remain until after the bloom was well over; supposing that if the flies were not by these means destroyed, their maturity would be delayed, so that they would not rise out of the ground until the time for mischief should be passed. However, little or no effect was visible from this proceeding. Wormy apples were as plentiful as in former seasons. I know not what to think of the failure in this matter. It can hardly be that the worms become chrysalids

in the bark of the trees. They would surely be detected on close inspection. And if they retire into the ground, it is difficult to imagine that they would not be destroyed, or at least delayed in their transformation, by the overlying depth of seaweed.

Allow me to bring to your notice another subject which I have not seen adverted to in the columns of the *Farmer*. The advantage of applying lime to cultivated land has often been discussed; but when lime is naturally superabundant in the soil, what then is the corrective? In this quarter there is land apparently formed of decomposed limestone. On removing the flat limestones lying on the surface, a black mould is seen underneath, and large collections of similar mould exist, resembling the richest soil in appearance, but which is, in fact, perfectly sterile. Not a grass or weed of any kind grows in it. A mass of black dust in summer, and mud in winter, it remains unchanged for years. It is to be presumed that similar decomposed limestone soils exist elsewhere, but I have not met with a notice of them, nor with any information bearing on the mode of treatment proper for land of this description.

If any of your correspondents may be induced to throw light upon the subjects of this communication, it will be satisfactory to your old subscriber and constant reader,
 FAR EAST.
 April 8, 1853.

P. S. Since writing the above, I have examined the old stems of currant bushes which have been subjected in former years to the inroads of the borer; and from certain indications observed, I am of opinion that the insects accomplish their changes in the wood; a circumstance that renders an effectual attack upon them a matter of difficulty. They might be more easily reached in the ground. It is probable that they are not to be annoyed or kept at a distance by the use of odoriferous substances; for the strong smelling black currant is liable to their invasions equally with the red and white kinds.

REMARKS.—There are important inquiries above, which we hope will receive the attention of our correspondents who are informed on the subjects.

For the New England Farmer.

TRANSACTIONS OF THE FRANKLIN COUNTY SOCIETY.

This youngest of the sisters of the Massachusetts family comes forth, gallantly by Prof. Mapes and guided by President Cushman, in an array calculated to arrest the attention, and secure the admiration of all she meets. If we do not mistake, she has made a distinct impression. Considering the material on which she operated, she has done much. Take, for instance, the plowing field, on which were only seven teams, and see the work reported—and sensibly reported too. The remarks on *deep plowing and thorough pulverization of the soil*, are my sentiments. They cannot be too oft repeated. The humor let off in view of the kinds exhibited, by one who knows how to feather his own nest as well as most other politicians, shows that the raucous of party finds no place at Agricultural Shows. This is as it should be. Fortunate is it, that there is one field on which men of every

grade, from the *surpliced parson* to the *frocked plowman*, can meet and greet on an equality. If no other benefit accrued from these shows, this alone would sanctify them. I admire the arrangement of this pamphlet, and the comprehensive intelligence it contains. I like to know who the farmers of Franklin are, and who countenance this employment. I would respectfully suggest whether the ladies of the county could not be brought in to take a more active part, with much benefit. If I rightly remember, in the account published of the Hampshire Society the last year, every man had his mate; and judging from what I saw and know of them, they were not the least interesting part of the show. The truth is, whatever the ladies take hold of, must go ahead. Charming creatures, God bless them.

April 27, 1853.

For the New England Farmer.

ANTS AND APHIDES.

MR. BROWN:—Sir—I observe that "Reviewer," in the April number, has called for remarks on ants and aphides, and finding myself fairly committed, I feel too proud to retreat, and yet half afraid to proceed; but I will to my subject.

My childhood was spent in a very retired place in the country, where children know very little of the costly and artificial amusements of the city. A few neighboring children, with myself, used to amuse ourselves by turning over small stones that had become partly imbedded in the turf by the side of the road, to see the ants under them carry their young down into their subterranean abodes. As I increased in years, ants became more and more subjects of interest, as they were continually pointed to, as patterns of industry; and yet there were so many obstacles in the way, that I made but little progress in their *real* history.

Some sixteen years ago, one pleasant spring day, I was attending to the dressing of my flower borders, and noticing that some house-leeks that I had growing in a terrace wall had been thrown out of place by the freeing and thawing of the previous winter, I went to arrange them, and on removing a stone, I saw a number of ants seize something in their mouths, and run about in great confusion. My first thoughts were, that they were protecting their young; the next was, it was quite too early in the season for them to have young, which induced me to examine closer, when I discovered that the objects of their solicitude were large plant lice, that appeared to be in a torpid state. I was not much surprised at what I saw, for it is generally believed that ants lay up food for the winter; and knowing many species to be carnivorous, or nearly so, I supposed the aphids were for food. But I related to my husband what I had seen. He appeared to think that they had a different object in view; so he took from his library the writings of HUBER, and translated for me his account of the ants of Switzerland, with which I was exceedingly interested, and which opened for me a new field for observation.

HUBER asserts that ants feed upon the honey-dew that exudes from the aphids, and are therefore induced to take good care of them, and that they carry them down into their burrows in autumn, where the aphids become torpid, and remain so during the winter, and that the ants expose them

gradually to the genial air of spring until they have revived into life, and then place them upon leaves or roots, where they will find sap suitable for their nourishment.

Since the above related incident occurred, it has been no uncommon thing for me to see ants attending upon aphids. When I have pulled up radishes or young beets in the garden, I have frequently found a cluster of small aphids upon the roots, and seen small ants take them in their mouths, and hasten to a place of safety, and appear quite as anxious to save their property as their lives. I have never seen an ant take an aphid from its family circle and place it upon a leaf by itself to found a new colony; and yet I am as certain that they do it, as if I had been an eye-witness of the fact. I have frequently seen on my woodbines a single aphid, on a fair leaf, half a foot above its fellows, and in two days after that, there would be a cluster of young ones around it, that could hardly be covered with a ten cent piece; the aphid could hardly have got away from its companions without assistance, for they are not travellers until they have wings; and they seldom have those until autumn.

In conclusion, I have little to say in favor of ants. I cannot point to any good deed they do, beyond their untiring industry. Of their evil deeds, they pile up the earth and make it unsightly and troublesome, and furiously attack those that disturb them, and almost every housekeeper is more or less annoyed with them among the eatables in her pantries and closets; they bite and mutilate our choicest and sweetest fruits, besides being extensive breeders of aphides. Some naturalists say that different clans of the same species carry on furious and exterminating wars with each other, and that many of them are slave-holders, and rob the neighboring tribes of their servants.

I have told my story, and as "dominion has been given to man, over every creeping thing that creepeth upon the earth," I leave the case for the gentlemen to decide, whether ants are worthy of life or not.

Of the aphids, I have no knowledge to impart beyond what was written by my late husband eight years ago. I therefore send the following extract from an address delivered by the late Judge DARLING before the Agricultural and Horticultural Societies of New Haven county, and city, in 1845.

"The plant louse, (aphid) is to be seen on the underside of the leaves of almost every species of plant. And there is appropriated to almost every species of plant its distinct species of aphid. Thus the cabbage-louse is wholly unlike that of the peach, which again is quite different from that of the plum. They exist of every color, green, black, blue, brick red, brown and crimson,—of all sizes, from that of a pea-bug to that of a mite, just visible, naked, or covered with meal or wool. Trees are not often killed by them, but they are checked in their growth, and made to become crooked and deformed. When the plant-lice fasten themselves upon the roots of herbaceous plants, as some species do, they prove fatal. The ladies may have observed their China asters, in particular, to turn yellow, stop growing, and finally perish without any visible cause. The grower of watermelons, too, sees the leaves of his vines become smooth and glassy, and after a few days die. This is caused by the aphid on the roots of the aster and

melon. The powers of increase given to this insect cannot be contemplated without amazement. Reaumur, from the most careful observation, estimated that a single aphid might be the progenitor of near six thousand millions in one summer.

"Well might Dr. Darwin fear that 'their countless numbers might in process of time destroy the vegetable world.' And yet perhaps there is no insect so completely in our power as this. We have only to put in practice the great rule of farmers, *to do everything at the proper time*, and we can protect our plants wholly from this insect with little labor. You see to-day, a plant-louse upon the leaf of a cherry tree; you neglect to destroy it, and to-morrow, there are 25—in 22 days more, there are 50,000, and in one day after that, there are more than 100,000. A touch of your finger on the first day of the month, may save you therefore the labor of a week with soap-suds and syringes at the end of the month. *Destroy the first that come in the spring, and the business of killing plant-lice is finished for the season.* We are informed by Huber, that the ants of Switzerland take into their keeping several species of the plant-louse, which they tend with the utmost care for the sake of their honey, as a dairyman tends his cows for their milk. We have evidence that the small brown ants, which you see coursing up and down the stems of cherry and peach trees with great animation, take charge of some of our plant-lice in a similar manner, particularly those on the cherry tree, and those on roots. Accordingly the aphid generally are first to be found very near to the ground. There search them out and destroy them. If unfortunately they escape your attention, till they have multiplied to a considerable extent, you may still master them with proper applications. One of the best of these for trees, is a *strong solution of whale oil soap. The ends of the branches may be bent over and held in the soap-water about a fourth of a minute.* A small paint brush, dipped in the wash, may be used in some cases, especially on cabbages, and on the branches of pear trees infested with that species, which collect about the buds and produces a black rust. Common soap-suds, warm and strong, will serve to kill the aphid, but it is apt to kill the leaves also. A decoction of tobacco is a sure destroyer of the aphid. It cannot be used upon leaves, but nothing perhaps is better to pour around the roots of plants, when those are infested by the insect. Ladies may call upon their friends who use cigars, to *puff the smoke upon their rose-bushes, and thus 'do the State some service.'* Several insects are appointed by Providence to assist us in keeping the aphid in check. Two only will be noticed at present. One is the speckled bug, about the size and shape of a half-pea, called by children, lady-bird, (Coccinella.) The other is a beautiful green fly, (*Chrysopa perla*), with eyes of gold and wings of lace, but fetid almost as the squash bug. The eggs of this fly are hung by threads, about a quarter of an inch long, to the underside of leaves. You will be careful not to harm those useful insects." Very respectfully yours,

MRS. NOYES DARLING.

New Haven, Ct., April 15, 1853.

TO CORRESPONDENTS.—One more word to our valued correspondents, to make their articles brief. We have twenty communications on hand now,

some of them from gentlemen of large experience, and who are also excellent writers, for which it is difficult to find room. The object of the writer is partially defeated, in writing long articles, as a long article is seldom copied, while one of three pages, written well, would, perhaps, pass through half the agricultural papers in the country. Be brief and comprehensive. There is no subject which can be fully discussed in a single article of suitable length for a newspaper.

FARMER PENNYWISE AND FARMER POUNDWISE.

There is a Farmer Pennywise with whom I am acquainted, who will occasionally raise a good heifer, steer or colt, for his neighbors who keep good breeds, and he is by accident occasionally benefited thereby. When he has such an animal in his flock, he is apparently uneasy until it is disposed of; and after selling such an animal, a heifer for instance, you may hear something like the following:

"Well, my dear, I have sold the big heifer for fifteen dollars; is that not a good price for a heifer of her age?"

"Good price, indeed!" his wife would reply, "you had better have sold two of them cat-hammed, crooked legged, scrawny things that you always keep for cows. The reason that our cattle always look so bad, and that we sell so little butter and cheese is, that you always sell the best heifers."

Poor woman! I pity her; her pride and ambition are injured, her children and self in rags, because her native industry and economy are cramped by the foolish and niggardly policy of her husband.

The picture is reversed in farmer Poundwise, who always keeps his best animals until full grown; then selecting his best breeders for his own use, he sells the rest. If he has a good young horse, he will say that he will make a fine team horse; a mare, she will make a fine brood mare.

"And what will you do with that?" says his neighbor, pointing to an ordinary animal.

"Between you and I," says he, "I shall sell that colt the first chance. Such an animal spoils the looks of all the rest, and will not pay for his keeping."

Thus he will sell his poor steers, heifers, sheep and pigs at the first offer. If not sold, he would fatten those that would pay the expense, and give away those that would not. Not pay the expense of fattening! Are there any cattle, sheep or hogs that will not pay the expense of fattening?—Reader, take some of each—of the real Pharaoh breed—feed them until fat; keep an exact account of the expenses, and you can answer this question yourself. In this way Farmer Poundwise always has valuable stock; his steers are ready sale, and command a good price; his horses are the best in the neighborhood, and the first to be looked at by purchasers. So with all the animals he raises. Pennywise, on the contrary, is thronged with an ill-shaped, worthless stock, that none will buy or pay the expense of raising; which are continually eating out his substance and making no return. Thus Pennywise drags on a miserable life in the

road to ruin, while Poundwise moves easily and happily along in the road to wealth.—*Maine Farmer.*

For the New England Farmer

FARMING IMPLEMENTS AND MACHINES.

MR. EDITOR:—I have noticed for the last twelve years that one of the greatest drawbacks to improved farming is a want of good implements and machines. Even those farmers who go in for improvements, and are known as friends to "new things," and are opposed to this "old foggyism," many of them are sadly in want of good tools to carry on farming with. This arises more from a careless indifference and a want of knowledge of what good tools are worth over poor, inferior ones, than it does from other causes. I say now what I have often said before, that I have seen more "slack farming" in the last ten years directly from this cause alone than from all other causes put together. Poor tools and indifferent implements beget careless habits in farmers, whereas improved farming implements give new life, energy and activity, and enable the farmer to go on and strive to do his work in the best manner.—There is a class of farmers, when they find out the real difference between good tools and bad ones, will immediately lay aside the old ones, and take the new ones. There is still another class of farmers who are well convinced of the importance of having good tools, because they have seen the good effects of them in their neighbor's fields. And yet they go on, from year to year, using the same tools, and why, simply, because they love their money better than they do good tools. So the consequence is, they keep their money, or spend it for something else, and let the tools go.

For the last six or eight years I have used two of Prouty's plows, the old Sod C pattern, and No. 54, self-sharpening. Both of these plows do good work, as well as many of their new patterns, which they now make. Ruggles, Nourse, Mason & Co. also make a variety of good plows of different patterns, which are in extensive use, some of which are hard to beat. There are also many other good plow-makers in the country. What the farmers want is to get a good plow or plows of some kind that will do good work. The "subsoil plow" is another implement which should be used much more than it is by farmers. All soils, in the course of a six years' cultivation, will be more or less benefited by subsoiling.

The best harrow that I have ever used is "Geddes' Hinge Harrow," with thirty teeth. This harrow works well, cuts the ground up fine, and as it is made in the triangle form, it works much easier than the square harrow with the same number of teeth, and it is not as liable to clog up. A single yoke of cattle can draw the harrow on any soil with ease, as it does not lug like the old catch harrows.

The "horse rake" is another important farm implement, and one of the greatest labor-saving machines in use on the farm. It is astonishing now to see how many farmers still rake hay by hand, preferring, as it would seem, to pay a dollar or more a day for hand rakers in preference to seven or eight dollars for a horse rake, which will pay for itself twice over in one season to any far-

mer who has got twenty-five or thirty tons of hay to get. In all smooth meadows, and those with but few stones, we prefer the "revolving rake," as it rakes easier, and rakes the hay cleaner from dirt and leaves than the spring-tooth rake. Another good implement is the large gleaning rake, with thirty teeth. This rake is made on purpose to rake after the cart; as it is made light and stiff, one hand can do more work and easier than two or even three hands in a windy time, with only the common hand rake.

In this manner I might go on, naming the different varieties of improved farming implements which are in use by many farmers. But it is not necessary to name them separately, as all thorough farmers will be ready to adopt them when wanted. I might name the "corn-sheller" as a great saving of labor; all farmers raise more or less corn, and to shell out a bushel in four or five minutes, is a saving of time. The one I have used for six or seven years is "Burrall's Iron Sheller;" this machine separates the corn from the cobs, letting the corn into the half-bushel, while the cobs are pushed out of a hole in the side. How any farmer, after using one of these shellers for an hour or two, can go back and set down on a shovel, or astride of an old frying-pan handle, to shell corn, is more than I can imagine. And yet there are many farmers to our knowledge who go on in this way now, and probably will for a long time to come. That they have not much idea of improvement is true; what they may come to hereafter, I cannot say. But one thing is certain, that if they can make any improvements at all, they must begin at some periods in their lives.—When farmers learn to make use of all the means in their reach for farm improvements, we then shall see something worthy of their name and station.

Yours, &c., L. DURAND.

Derby, Conn., April 19, 1853.

For the New England Farmer.

THE STATE FARM.

MR. EDITOR:—At the last and concluding Legislative Agricultural Meeting, among other suggestions for the advancement of Agricultural Science, that of establishing a *model farm* or farms was adverted to by some of the speakers. That a model farm, under the patronage of the State, might be made to greatly aid the interests of Agriculture, no one, I think, would for a moment doubt,—provided it was reared and carried on in such a manner as to render it *truly a model worthy of being patterned after* by every farmer in the State. In addition to its being a *model farm*, it should also have an experimental department. To start such an establishment, the State need not purchase more land, as it already owns a farm in Westboro' in connexion with the State Reform School, of sufficient dimensions to commence with. This farm ought long before now to have presented, at least, an approximation to a *model farm*; but the thing seems never to have been thought of; although this establishment possesses nearly all the elements necessary for the successful management of such a farm; and that, too, without any additional expense in maintaining the institution; but on the contrary, an improved system of husbandry, would, in the opinion of many persons, materially lessen its present yearly demands upon

the State treasury. This farm contains, I believe, between two and three hundred acres of various soils,—favorably located, which, with the adequate supply of labor of the boys, together with an official Agricultural force, who if not already, might in future be selected with reference to their proper agricultural attainments, affords such an economic opportunity for the establishment of a model and experimental farm, that it is to be wondered at that it has not (at least to my knowledge) been suggested before. Believing such an establishment would greatly aid the interests of agriculture, and believing also that here is a most favorable opportunity to try the experiment at no extra cost to the State, I have ventured thus to suggest my ideas upon the subject to you, Mr. Editor, and to the consideration of your numerous readers. I see no good reasons why the State Board of Agriculture, together with the trustees of this institution, if clothed with the requisite authority by the "powers that be," could not cooperate in bringing about this needed transformation in this already State farm. What say you, Mr. Editor, to these suggestions? If you think favorably of them, give us the weight of your influence, and the thing is done—perhaps.

T. A. S.

Westboro', April, 1853.

REMARKS.—"T. A. S." has given above valuable and timely suggestions, and we see no reason why they may not be acted upon with benefit to all concerned. At any rate, his remarks prove that he is interested in the subject, and has taken the true course to make others so. Accomplish this, friend "S.," and the "powers that be" will come, up to the work. Legislators, and other associated deliberative bodies of men, are usually a little behind the masses.

INTERESTING TO FARMERS.—The N. Y. *Express* makes some suggestions in connection with a reference to the material advance in the prices of beef cattle, which are worthy the consideration of farmers and farmers' clubs. The reason for this advance is found in the fact that the graziers in the northern Illinois region, who have heretofore been among the most extensive contributors to the great cattle markets of New York, Philadelphia, Baltimore and Boston, now drive their herds across the plains to California, where very much higher rates are realized. The pasturage along the route is good, and the cattle arrive in excellent condition, and find a ready market. The cattle dealers of Ohio are turning their attention in the same direction, and in some instances have recalled their droves from their journey to New York, to be sent across the plains. New York requires some five or six millions worth of animal food in the course of the year, and the *Express* urges that the only way to meet the threatened deficiency, is for the agriculturists nearer home to bestow more attention on the raising of cattle. Another drain upon the beef market is made by the very extensive shipments to Australia. Immense quantities of beef have been, and are now being packed and shipped for that market. In view of these facts, there cannot be a doubt that the raising of beef will be a much more profitable business than it has been for years past.

SPANISH MERINO EWES.

We have been favored by Geo. CAMPBELL, Esq., of West Westminster, Vt., with a group of his beautiful sheep, which we take pleasure in laying before the reader. The raising of wool, to say nothing of the good mutton, has got to be an important branch of business in various portions of the country. The abundance and cheapness of cotton cloth are among the rich blessings of our existence. It is a great civilizer. And now wool; in various shapes, is becoming common among all classes of our people. In the way of coarse carpeting, its use is a matter of economy with the poor; it is manufactured into soft, light and very warm waddings, and in the sleighs and carriages, is taking the place of the buffalo robes. It is also made into under-shirts, and in our variable climate, is conducive to health.

But Mr. CAMPBELL will explain the group himself.

The group of ewes, of which I send you a cut, is of my old *Spanish stock*, which are pure descendants from the importations of JARVIS and HUMPHREY. They are of fair size and well proportioned, with thick, long, fine wool, which is sufficiently oily to produce a natural dark surface.—According to their size, they produce more wool than the French Merinos.

The whole flock of this breed sheared an aver-

age of 5½ lbs. of well washed wool last season, which was sold at 52½ cts. per. lb. I have just sheared my two year old ewes of this stock, without washing. Their fleeces of only eleven months growth, average a trifle over 8 lbs. Many of them are as white, and appear to be almost as clean, as washed wool.

Their wool will compare, as to quality, with any Merinos in Vermont, the Siberians excepted. I do not hesitate to give it as my opinion, that more fine wool can be grown from the same amount of keeping, than of the coarser grades.

Many of the sheep in the country called Merinos, are not worthy of the appellation, and those wishing to purchase a pure article cannot be too cautious of whom they purchase.

Geo. CAMPBELL.

West Westminster, April 18, 1853.

GRAFTING CLOTH.—We have been using the past week the grafting cloth recommended last year by Col. LITTLE, of Bangor, and find it a most admirable article for grafting or covering wounds made by pruning. It is easily made and very convenient.

6 lbs. beeswax.

1 lb. rosin.

1 pint linseed oil.

This quantity, spread evenly on cotton cloth, would be sufficient for several farms for the year.

For the New England Farmer.

DISSOLVING BONES.

MR. BROWN:—In the last *Farmer* (monthly) you gave some directions for dissolving bones in sulphuric acid. As I have made three unsuccessful trials, and do not care to "give it up so," will you give us a little more definite information on the subject.

How finely should the bones be broken?

What is the best and cheapest way of crushing them? In the trials I made I found the labor of breaking them quite considerable. (a.)

Are the bones entirely dissolved? (b.) I have not succeeded in dissolving more than $\frac{1}{2}$ to $\frac{3}{4}$ of them.

Will as good results be obtained when but few pounds of bones are used, as when the quantity is 100 or more? (c.)

Is it essential that the bulk of the water should be just $1\frac{1}{2}$ times the bulk of the acid? (d.) I find different writers differ in this particular.

What is the most convenient method of using the dissolved bones, and how large a quantity can safely be applied? (e.) A SUBSCRIBER.

REMARKS.—(a.) They should be first broken into coarse pieces and then ground in a mill.

(b.) They will be if the bones are ground.

(c.) The difference in quantity will probably have no material effect on the process.

(d.) If the bones, when ground, are not converted into a soft paste-like substance by the operation, add a little more acid.

(e.) The bone manure may be used in any way in which you use other manures; like all other fertilizers, keep it covered up. There are so many varying circumstances, that no rule can be given for its application. Professor Low states that some of the English farmers were in the habit of applying 60 or 70 bushels to the acre; while here 10 or 15 bushels is considered a good dressing. But the quantity required must depend on the condition of the land. See *Farmers' Encyclopedia*, article, "Bones," and BROWN's *Muck Book*.

NEW SEEDLING GRAPE.

O. M. Hovey states in his *Magazine of Horticulture*, that a new seedling grape has been produced from a native vine, fully equal to the Isabella, and ripening at least one month earlier than that variety. He received specimens of the fruit as early as the middle of September, which were the very last of the crop. The berries were round, black, and covered with a dense bloom; bunches as large as those of the Isabella; skin thin; flesh tender, with scarcely any pulp, "exceedingly sweet and delicious." The vine is hardy, vigorous and productive. The name of the originator is not given, as it would, if known, subject him to a flood of orders. The vine will probably be secured in the hands of a few, and in due time be offered to the public, who will of course make some allowance for the charms which novelty throws around every new horticultural production. Should this prove nearly so valuable as is hoped, and the same result be verified of Dr. Valk's new seedling, and

Longworth's newly discovered hardy foreigner, we shall soon have quite an addition to our list of valuable varieties:

REMARKS.—The originator of the grape mentioned above presented us a liberal dish of the fruit last autumn, and we found it scarcely inferior to the best Isabella. It ripens, as stated, in the open air, and before the usual heavy frosts. We hope it will be extensively propagated, and afford a grape that may be depended upon in all parts of New England.

For the New England Farmer.

SHELL LIME.

MR. EDITOR:—On reading the article on this subject, in the last number of the *New England Farmer*, I noticed a slight error or deviation from the meaning, which it was intended to convey. The error related to the quantity of common salt. One bushel of common salt is designed to form the result. The recipe referred to, states four barrels of shell lime, one bushel of common salt, and one cord of swamp mud or peat. Another recipe, which I have noticed, in order to form a similar result, is the following:—Take one barrel of common quick lime, one bushel of common salt, and one cord of peat or muck. The salt is to be dissolved in water; with this solution, the lime is to be slaked, and this compound is to be mixed with the peat. These two formulas are prepared in the same way and produce a similar result. The explanation may be regarded as correctly stated. Lime, slaked in this way, results in the formation of caustic soda, which is highly active when combined with the other substances. The soda, the elements of air and water, viz: oxygen, hydrogen and nitrogen, and the geine as found in the peat, form, in their ultimate disposal, a compost rich in nitrogenous matter, largely contributing to the formation and growth of plants; while a reaction is made upon the elements of the soil, which will be in favor of subsequent vegetation. These effects and changes can be demonstrated, by the well known actions of chemical science, and can be proved by actual fact. These processes are not only richly remunerative to the practical farmer, but are also highly beautiful and instructive to the agricultural chemist.

There is latitude, however, in the use of these and other materials. The compound noticed may be mixed with the droppings of the stall and peat. Plaster and ashes may be added. Or shell lime or common quick lime, plaster, ashes and common salt, may be mixed with the droppings of the stall and peat with sand or loam, until at the close of the year, or at the return of April and May, a pile of compost may be found, five, six or seven times greater in amount than the droppings of his stock. The elements will be steadily and untiringly at work. Man and his domestic animals may stop to refresh themselves and may be preparing for fresh efforts; the sun may retire beneath the horizon and leave the earth to be shrouded in darkness; all nature may be hushed into silence and repose, and man himself may be wrapped in the slumbers of the night; but these elements are working out their mighty changes and yielding a sure reward to the care, industry and economy of the husband-

man, manifesting the handy workmanship of Providence and her readiness to minister to the wants of man. The quantum realized in these preparations at the time of use, will depend upon the amount of materials added and the skill of the actor.

BOWEN BARKER.

Hanson, April 18, 1853.

For the New England Farmer.

SPARE THE SWEET SONGSTERS.

MR. EDITOR:—Dear Sir—A few short weeks ago, the low, plaintive note of the blue-bird was borne to our ears on the morning gales of spring. And it gladdened our hearts; for it was a harbinger of the return of sweet-scented winds and sunnier days, and its arrival was like the return of an old and valued friend.

A few days later, the beautiful red-breast had returned to its summer haunts. But a foe awaited him, and scarce had he commenced to cheer us with his sweet song, ere the sharp report of a gun is heard, and the winged messenger falls from his airy height, fluttering in the last agonies of death.

Oh! who caused its death? 'Twas a member of the self-styled *human* family—in *human* would be the more fitting name. I grieve to say it—but there is a sad propensity among the boys to shoot the innocent birds—those that do no harm, and much, very much good. Some do it for mere sport—others, because *others* do. Some wish to exhibit their prowess, and think people will call them manly and courageous. But, far from it. It betokens a coarse, evil-dispositioned, lawless character.

'Twas Fast-day that I saw two lads out hunting the pretty robins, and when asked why they killed them, one returned for answer—"O, to eat." To eat! yet they were the sons of wealthy fathers. My advice to those fathers is, to compel or persuade their dainty sons to stay at home on the holidays, and feast on less dainty, but more substantial food. Our Creator made all manner of insects; but He also provided us with birds, to keep them from increasing too fast; and if farmers permit their sons to kill them, they must not complain, though worms cut down their corn, and bugs eat up their vines; the borers construct canals and railroads in the trunks, and caterpillars weave silken houses in the tops of their trees. No; not even if worms and insects approach their worthy selves with hostile intentions. And you, young readers of the *Farmer*, did you never walk forth to admire the beauty of Nature, when the sweet song of the birds formed its greatest attractions. Oh! spare our sweet songsters, and they will repay you, by singing a song sweeter than ever came from mortal lips.

C. P. B.

Sutton, April 16th, 1853.

REMARKS.—We wish there were a general police all over New England on "Fast" and "Election Days," to prevent people from destroying the birds, or, if they refused to desist, to enforce the penalties of the law on them. A friend living in Danvers has informed us that he has spent many an election day in traversing the fields and shady lanes to prevent boys from killing the birds. His praise should be on every lip and his example followed by others.

VALUABLE EXTRACTS.

Some notice has already been made of the *Transactions of the Franklin County Society* for the year 1852; but we turn to them again with pleasure, to make extracts from the valuable address by Prof. MAPES at the annual exhibition in September.

The reports of this gathering show—as have many others—that it was not an exhibition, only, of the grosser elements, the oxen, the horses, cows, vegetables and fruits, but that it was made an intellectual occasion, where the mind and morals were cultivated, as well as the fruits of the earth. Beside the address to which we shall chiefly turn our attention, there were others, which would grace any of our halls of learning, and were models for the young, as well as full of instruction for all.

In the remarks of Mr. CUSHMAN, President of the Society, he said that the path of duty and usefulness to farmers is like that to fame—upwards and onwards. We may have done well to-day; we must do better to-morrow and in all coming time. "The past, for good or evil, is behind us. The *present* only, beautiful but fleeting, can we call our own. He that can seize her, ere she flies, and make her wholly his, is indeed happy."

"Progress, improvement—a higher destiny, a happier day—these all men should seek—should labor for, to the last."

All he said was just, and applicable to all. "If we *knew* more, he said, we could raise more with the same labor and expense; and consequently could make more profit than we now do."

Mr. PAIGE, President of the *Bristol County Society*, made pleasant and excellent remarks. In visiting two shows, last year, each attended by 10,000 persons, he had not heard a profane or vulgar word, or seen any one intoxicated! Are not these the happier days that the old poets celebrate,—

—“those golden times,
And those Arcadian scenes, that Maro sings,
And Sidney, warbler of poetic prose!”

Highly as these annual gatherings are estimated, they are not fully appreciated yet, as there are thousands who do not attend them, and know little or nothing about them. They are, however, what commencement is to the student and his friends; the convention to the statesman, when some great project is on foot; or the anniversaries of the various religious denominations. They are a summing up of the operations of the year; a comparison of notes and opinions; a bond of union, and powerful incentives to further progress. As at present conducted, we do not anticipate any unfavorable influences springing from them. Their moral aspect is guarded with a stern vigilance, so that no licentious practices shall be mingled with their exercises. But to our extracts:

SYSTEM—OR SCIENCE.

The learned professor said, "the day has passed away when farmers repudiate science. They now know that science means simply knowledge reduced to a system so as to be readily taught and easily understood, and therefore every truly practical farmer must necessarily be a scientific agriculturist. Books are now no longer repudiated, and a fact is known to be no less a fact because it is printed. The practical man, who is sufficiently daring to adopt new and useful practices which have been well tested by able persons is not now looked upon by his neighbors as visionary."

That there is more respect for scientific effort than heretofore, there is no doubt; and that there is more confidence in it, is encouraging. But large numbers look on it still distrustfully, or, if they depart from their old habits, engage extravagantly in the opposite extreme.

ON VENTILATION.

"The ventilation of stables is of great importance. When animals are surrounded by the gases given off from the surface of their bodies, and annoyed by quantities of ammonia continually being freed from their fermenting excreta, they require a much larger amount for their sustenance than when in stables properly ventilated. If an ox be enclosed in a varnished silken bag tied about the neck so as to leave the head free to breathe the atmospheric air, the amount of gases given off from the surface of the body and confined within the bag for a single 24 hours will cause his death; so that it will be readily understood that the ill effects of badly ventilated stables are in a great degree deleterious. Proper temperature is of the highest importance. The organism of the ox is such that his improvement in flesh making is dependent not only on the amount of food consumed but also upon the temperature by which he is surrounded when digesting it. Much of its results will be required to supply the necessary animal heat, unless by proper protection from cold he is not called on to furnish it by parting with a corresponding quantity of fatty matter."

More attention is given to the subject of ventilation, both in our houses and barns, than has been the practice heretofore. The subject of ventilating barns was freely discussed at the agricultural meetings at the State House during the past winter, and facts were stated, proving the importance of a pure atmosphere, even for our animals.

GREAT PRODUCTS FROM HIGH CULTURE.

"Look at the Bergen gardeners. Many of them pay \$50 or some \$75 per acre per annum, yet by improved methods of culture they raise remunerating crops, while gardeners in other parts of the country would consider such a rental a complete drawback to their success.

"A few farms are found, in almost every town

where wheat is grown, that yield 45 bushels of wheat or more per acre, and still the average crop of this State is not 13 bushels per acre. Should not every farmer, for this reason, endeavor to get at the cause why his crops are so inferior! and more especially so, when I inform you that in very many instances, the soils upon which these differences of crops exist are very similar. Some farmers in Massachusetts have raised 100 bushels of shelled corn per acre. Why should not all endeavor to raise similar amounts?"

WHY CROPS LODGE.

"I have been requested to state the causes why wheat and other grain crops sometimes lodge.— This is evidently for want of proper strength of straw, and the cause may be then readily understood. The ratten, bamboo and corn stalk, &c, have a silicious coating or varnish on their surfaces. If we place in the fire an ordinary Hessian crucible and throw in it the outer peelings of corn stalks, keeping the crucible at a red heat, the woody fibre will burn off, and by continuing the operation for many hours until the coating of many stalks has been thus consumed, we shall find the crucible to contain a button of glass, which being analyzed will prove to be a combination of silice, the base of common sand with one of the alkalies.

"Now as common sand is not soluble in water, and as plants have no mechanical contrivance for disintegrating it, they are unable under ordinary circumstances to take up the proper amount for creating their surfaces and giving strength to the straw; for straw, like the corn stalks, owes to silice the whole of its power to maintain a perpendicular position; but if the soil contain either lime, potash, or soda in sufficient quantities to dissolve the silice, or rather to render it soluble so as to form the silicate of lime, the silicate of soda, or the silicate of potash, in sufficient quantities so as to be dissolvable in water and carried into the plant for the necessary appropriation, then the crops will not lodge.

"If the farmer manures entirely with putrescent manures, such as those furnished by the barnyard, and his soil be not originally charged with excess quantities of alkalies, the growth of the grain may be large enough by its weight to bend down the straw."

We suppose the same reasoning is applicable to the grass crop. On a clay soil where the grass in certain parts of the field usually lodges, interesting experiments may be made by spreading sand liberally on some of the spots, and noting the effect.

IMMENSE SUPPLY OF FRUIT.

"Notwithstanding the great scarcity of fruit in this country compared with our wants or desires, still the amount raised is many times greater than in England. During the last year, an account was given in the *London Times* of the amount of fruit

brought to England from the continent. The home production was also estimated. I had the curiosity to reduce the quintals, bushels, hampers, etc., enumerated, to the size of peach baskets, and found that the whole amount of fruit consumed in Great Britain in one year was not as great as the amount of peaches and strawberries carried into the New York market from the State of New Jersey in one week. The Amboy railroad has received in one day, \$1100 as freight on peaches, at 8 cents per basket, and this is only one of the many channels through which peaches are carried to New York from New Jersey. Ninety thousand baskets of strawberries have crossed the Jersey city ferry in a single day. A steamboat from New Brunswick, carries daily many thousands baskets of peaches on her deck. Steamboats are daily plying during the peach season from Delaware to New York, and one grower, Mr Reybold, owns two steamboats used exclusively for this trade."

Near the cities and large towns of New England, there is a pretty fair supply of good fruit.—But in the country towns, beyond good apples and a few indifferent pears and cherries, there is little or nothing in the way of cultivated fruit. There is room for the effort of a thousand minds and hands among us, on the subject of gardening.—Comparatively few farmers have any of the smaller fruits on their tables, such as strawberries, gooseberries, raspberries, blackberries, plums, apricots, peaches, and the finer pears. They have not learned their value as articles of diet or as crops profitable for the market. And the love of home, the contentment, and the influence over the morals and heart which a well-ordered garden creates, has, with most farmers, never been taken into the account at all. There are two or three hundred thousand, perhaps half a million people in the State of Massachusetts alone, who raise no fruit. To afford them a fair supply, such as health demands in hot weather,—to say nothing of appetite,—requires vastly more than is produced among us. The New Jersey peaches are brought to us in large quantities; but as they must be plucked some time before they are ripe, in order to get them here with any of their fair proportions, they undergo an acetous fermentation which renders them unhealthy.

USES OF THE ATMOSPHERE.

"In all manipulations of the soil, the agriculturist should bear in mind that the atmosphere plays an important part in all vegetable growth. Without its influences, none of the chemical changes necessary for the creation of plants or the meliorations of soil can take place. Subsoiling, plowing and underdraining, are mere adjuncts to facilitate the meliorating influences of the atmosphere. The hoe, and the rake, cultivator, and every other agricultural tool used for disturbing the soil, are for the common purpose of permitting

the atmosphere to pass between the particles. Its uses above and below the surface of the soil are equally efficient. On top it is the vehicle for the reception of moisture and of gases arising from decaying vegetation which it holds until the descent of dews and rains, carrying them into the soil. Oxygen, one of its constituents, is necessary to cause the ultimate particles of the soil to yield up their constituents for the use of plants. Without oxydation, the soil would be destitute of many of these materials, which are rendered soluble and fit food for plants by atmospheric agency. The great constituent of all plants, carbon, exists in the atmosphere as carbonic acid, and is received from the decomposition of farm crops, animal respiration, etc.; hence the great mass of all plants is derived from the atmosphere, and if it be shut out from freely circulating in the soil, we cannot hope for profitable results. In the compost heap, it is equally valuable, for both in it and the soil, it is the vehicle, transferring heat and moisture. The slightest reflection, therefore, will show the farmer how necessary it is to manipulate his soil so as to insure the easy ingress and egress of atmospheric air.

VALUE OF CARROTS.

"Cattle become accustomed, during summer, to green food, and when kept altogether on hay and other dry fodder, they cease to take on flesh with great rapidity.

"The use of carrots, particularly, should be introduced. Carrots for horses are now the ordinary practice of even the livery stable keepers of the larger cities.

"A bushel of carrots and a bushel of oats fully equal as food for the horse two bushels of oats; for although carrots do not contain the same amount of nutriment by measure as the oats, still their pectic acid gelatinizes the contents of the stomach of the animal, and enables the oats to be entirely digested."

Too much money is paid out by farmers for grain for their milch cows. There must be a more general resort to roots to be fed with good English hay; when these are in sufficient quantity to carry the stock through the winter, there may be profit in producing milk for the market.

VEGETABLES.—Put in the seed liberally for vegetables for winter feed for stock. They will promote the health of your cattle, save hay, and enable the milk-producer to keep his money, instead of paying it out for grain. Sow various kinds,—carrots, beets, parsnips, mangel wurzels and ruta bagas; sow in small patches on different soils, and then, whether the season be wet or dry, a fair crop may be expected.

BUGGY PEAS.—Before sowing peas, immerse them in hot water for a minute or two, by which means

the weevil will be killed, and the sprouting of the peas will be quickened.

Prof. Harris says the insect is limited to a certain period for depositing its eggs; late sown peas therefore escape its attacks. The late Mr. Pickering observed that those sown in Pennsylvania as late as the 20th of May, were entirely free from the weevil; and Mr. Worthington, of Rensselaer County, N. Y., who sowed his peas on the 10th of June, six years in succession, never found an insect in them during that period.

From the New England Farmer.

ANALYSES—PLOWING—WATERING.

MR. EDITOR:—In your paper of the 12th of February is a letter signed S. F., from Winchester. The writer is very skeptical as to the value of analyses of soils, and gives the analysis from the Scioto valley, and from Palmer, Mass., in which the advantage is rather on the side of good old Massachusetts, God bless her! I have mislaid Mr. Wells' statement, but if I remember rightly, he remarks on the extremely minute division of the Scioto soil—he was obliged to use an extra fine sieve to separate it, I think sixty meshes to an inch, and the percentage of coarse matter was very small which did not go through and that was mostly fibrous. A state of things certainly most conducive to the growth of all plants, as the roots are able to penetrate in all directions, and always in close contact with appropriate food; and then again the great depth of the soil is to be considered, which we have not.

There is another case of some remarkable tobacco land in Virginia, which on analysis proved to contain a very large percentage of iron, but it was in the same state of minute division, and it is the best land in the State.

Analysis tells us that our soil contains a rather better supply of the various salts necessary to vegetation than the Scioto—but we must put our land to the plow, dig deep, and pulverize well; to produce the same effects; no four inch skinning will do it. Delicate roots, whose pores must be sought for with the aid of a magnifying glass, require their food to be presented in homoeopathic doses, and it is very unreasonable to expect a great crop, where the plant is forced to seek its support through a hard pan that has not been disturbed since the flood. That large crop, can be raised in these parts, by proper attention, is a settled fact; and I believe easier than poor ones.

Farmers will be very incredulous, on being informed that their iron tailed cow can be turned to a more noble use, and yield a far greater profit, by watering them manure, instead of watering their customers' milk! (not that I would insinuate that all farmers make a practice of it, but there are amateurs in all professions!) like that prince of farmers, J. J. Mechi, who by high culture, is able to raise mangel wurzel at an expense of one dollar twenty-five cents per ton of 2240 lbs.! American farmers think of that! The average on a ten acre field was forty-three tons per acre! costing fifty-three dollars seventy-five cents; in fact his whole farm is kept like a garden, and produces accordingly. His procedure in the above case, was to apply two hundred and twenty-five

pounds of dissolved bones to the acre, and water the growing crops profusely with liquid manure, he finds that one load of dung rendered liquid, will manure as much land as four loads dry, and its effects are seen at once as it penetrates the ground and presents itself in an acceptable manner to every tender rootlet, whereas in the common mode of spreading with a shovel, it is scattered here and there, some plants getting more than their share, and others not enough. At first sight, it might appear quite a task to water acres of land! but I think it would be found in practice that it can be done cheaper than by the old method, as from a watering machine (which any farmer could make) it spreads itself as fast as the team walks across the field. One hundred and fifty pounds of green manure to one tun of water, or two hundred and fifty gallons, would be quite strong enough probably.

I think it is not best to spin any more yarn this time, as perhaps Mr. Editor you will not think it worth weaving into your pleasant sheet, particularly when you learn that it comes from a book farmer, without any land!

Respectfully yours,
Under the Cliff, Roxbury, Mass.

For the New England Farmer.

PLOWING OR PLOUGHING.

The season for this operation having again returned, awakens the inquiry, how is the term properly spelled? We cannot perceive any good reason why three letters (*ugh*) should be used, when one (*w*) will do quite as well. We know such has been the usage—but usage without reason, is not of itself satisfactory. If authorities are cited, they will be found both ways. The *Albany Cultivator*, the leading agricultural journal of the Empire State, uses the letter *w* only, the *Massachusetts Ploughman*, adheres to the old mode. We are opposed to innovations, without benefit; but where distinct benefits are apparent, and no disadvantages to accrue, we go in heartily for the improved mode of spelling. It is time that uniformity should prevail. Will not your Board of Agriculture, Mr. Editor, settle this matter? This brings to mind a favorite idea, oft repeated by a distinguished member of this Board, that not more than six per cent. of the lands—or six acres in a hundred, of the lands in Massachusetts, are fit to be plowed. I am at a loss to comprehend the meaning of this assertion. Surely it cannot be, that generally on a farm of one hundred acres, not more than six acres, can be benefited by the plow. The reverse of this is nearer the truth.—On most farms it will be difficult to find six acres in a hundred, that will not receive benefit from being plowed. Pastures, as well as fields, may be benefited by the plow. To be sure, some lands are much rougher than others, but very few lots are so rough, that a plow cannot be beneficially used in some parts. I would not have presumed thus to criticise this expression, had it not have been reiterated, year after year at the Legislative meetings, by one whose instructions are regarded by the people with much respect. I hope, therefore, he will condescend to explain what he means, when he says that "not more than six per cent. of the lands of Massachusetts are susceptible of benefit from the use of the plow." R.

May 2, 1853.

For the New England Farmer.

THEORIES AND FACTS—DO THEY AGREE?

I once heard it remarked by a neighbor of mine, that "he never yet saw anything that he could not find some fault in." I would not cultivate the spirit of fault-finding; I would not strive hard to see the spots on the bright face of the sun; nor blemishes in the character or outward life of my dear friend. But sometimes, without seeking them, and contrary to my sincere desire, I see, or think I see, imperfections in my wife Hlepzibah, in my daughter Felicia, and, I grieve to say it, in the *New England Farmer*. Now in all these cases I would very much like to be able to believe that there was no blemish, not even "the shadow of a shade" to obscure their brightness. But alas! I must either believe they sometimes err, or else that I myself do not see clearly. Under these circumstances, who can doubt which horn of the dilemma I take hold of? Possibly I may be in the wrong—if so, I ask for light. As I am a man of few words, I will come at once to the point.

In the first place, you, Mr. Editor, assert in the last *Farmer* that the pine "has the most agreeable and wholesome quality of drying the atmosphere where it stands." (a.) Is it so? I have always supposed that all shade trees had the opposite tendency, in proportion to the denseness of their foliage. I have always been a great lover of wood-walks, and have spent many an hour in pine woods, and oak woods, and mixed woods, but it never struck me that there was, on similar soils and similar exposure to the sun and air, any excess of dryness in the pine woods over other woods. But it may be that my physical organization is not sufficiently delicate to note the nice difference that may exist. If your opinion is grounded on scientific facts, would it be asking too much to request that you will give those facts? I presume they would be interesting to others, as well as to myself.

Nextly,—A correspondent, on the same page, who writes about plaster, advances one or two notions which, I think, a more careful observation would show to be erroneous. He says: "Why some fields become green sooner than others in the spring, is because more grass was left on them in the fall; the grass does not grow, but the withered blades turn green." Now I would in all diffidence ask, if the writer of that sentence has ever actually seen the dry, withered blades of grass become green. I can hardly believe it. I must, for the present, think he permits his theories to deceive his senses. (b.)

Again, a little further on, the same writer gives me occasion to infer that he supposes stones to exert a beneficial influence on the soil, or at least that they promote the growth of the neighboring vegetation. (c.) I know there is a prevailing opinion that stones make themselves useful by attracting moisture on soils that would otherwise be dry, and assist to warm those that are cold and wet. If they do perform both these offices, they are accommodating, truly. But is there not more theory than fact here. I grant there is some fact; but it leads me to a different conclusion. I grant for instance, that when the stones lie upon the surface of your land, the grass around the stones will be stouter than elsewhere. Why is it? Simply because that grass has the advantage of the

soil beneath the stones; and thus, if the stones cover half the surface, the grass on the other half has the use of the whole field. But do you get more grass because the stones are there? I think not. And where the stones sink deeply into the soil, I have not been able to perceive that the grass which surrounds them is more luxuriant than that which is at a distance from them. There is a fine opportunity to examine this matter in some of the pastures lying north of old Pongatasset, in this town.

JONATHAN DOOLITTLE.

Concord, April, 1853.

REMARKS.—Our correspondent's signature is a misnomer. We have the pleasure of his acquaintance, and know, that instead of "doing little," he is a man of progress, and does his part to keep the world in motion. His inquiries are interesting, and shall receive such light as our "dim candle" can shed upon them.

(a.) Our remark that "the pine has the most agreeable and wholesome quality of drying the atmosphere where it stands," was not based on scientific facts, but upon the observation of many years, strengthened by what we considered corroborating circumstances.

The character of the tree depends much on the shape and operation of its leaves. Those of the pine are long, numerous, and needle-like, dividing the currents of air into minute portions as it passes among them, and producing those delightful sounds, peculiar to the bass notes of the *Æolian* harp.

At Nahant, where the winds swept unobstructed over the farm of Mr. TUDOR, frustrating all attempts at raising the finer fruits and vegetables, he constructed a fence sixteen feet high with spaces of two or three inches between the palings. The effect upon the damp east winds and cold, was such, that on the south side, the frost only penetrated the earth about as many inches as it did feet on the north and east side, and he was enabled to raise fruits, vegetables and flowers in perfection where they would not mature before! There was a warmth and dryness on the south side, while the other side of the open fence was damp and chilly. Do not the pine leaves and the fence have a similar influence on the atmosphere? Is there not a reason for setting pines on the north-eastern exposure of gardens, beside that of merely obstructing the wind? Is it not softened and tempered in its passage through them, losing something of its chilling dampness, as well as force? We believe so, and therefore, "that the pine has the most agreeable and wholesome quality of drying the atmosphere where it stands" by the mechanical, and perhaps, physiological, operation of its leaves. MICHAUX says, in his interesting work, *The North American Sylva*, "the debris of granite rocks may be considered as the universal soil suited to the pine and fir tribe, and a dry subsoil an essential condition for their entire prosperity, but

they will grow on all soils whatever, that are not surcharged with water. The roots are near the surface, and hence do not require a deep soil; and as their needle-like leaves do not carry off much moisture by evaporation, their soil may be drier than that required for any other kind of tree."

In *Peck's Gazette*, published some twenty years since, after describing the beauty of the pine, he speaks of the delightful atmosphere in their presence, calling it a "*terebinthine* atmosphere;" the word *terebinthine* being the Latin word for turpentine.

We thought our theory worth uttering;—at some future time it may be dignified into a scientific fact.

(b.) The gentleman who said the reason "why some fields become green sooner than others, in the spring, is because more grass was left on the them in the fall, and that the *withered blades turned green*," stated what, he said, were facts—what he had carefully observed, by marking portions of grass and watching the change from day to day. He presented parcels of the grass which he said had been changed in this manner.

(c.) With regard to the good influence of *stones* on the land, the gentleman who introduced the topic at the agricultural meeting at the State House must defend himself. Many persons (but not among them our intelligent correspondent, "Jonathan,") seem to have an idea that weeds, beyond a sufficient quantity to give the pigs an occasional feed, and stones enough to make what wall is wanted, are nothing but a pest and a plague. In wisdom He made them all, that made the corn-plants and the fruits and flowers. Weeds are but grasses out of place, and stones impart, at least, but *future harvests of manure*! Large portions of our soil come from the stones; the granite, so common all about us, contains some of the richest elements of fertility. One kind of its feldspar contains nearly *seventeen proportions* in a hundred of potash. We are also dependent on the rocks for the lime and gypsum which we use as fertilizers. Marl is a compound of lime and clay, while clay itself has been formed by a decomposition of rocks, such as granite, feldspar, clay slate, &c. We have heard of an instance where a farmer manured a large field unwittingly. Wishing to dispose of a surplus of small stones, he placed some hundreds of loads along a side hill where he intended at a future time to build a wall; circumstances prevented this, and after a while he noticed that the grass crop for several rods below the stones had materially increased; and this process went on until several acres were fertilized in this manner. We know nothing of the particulars of this case, but presume the stones were in a state of partial disintegration. If they were feldspar, it will readily be seen, from what has al-

ready been said, what an amount of potash they might supply.

Our friends, however, will hardly consider their stone heaps a reliable source of fertility for their exhausted acres. We only mention this instance to show that with many of us, there are a great many things "which our philosophy never dreamt of."

For the New England Farmer.

FRUIT TREES.

The very great and increasing interest in fruit, and fruit trees, will be my apology for offering a few remarks upon the subject.

Your correspondent P., a few weeks ago, spoke of an orchard of 40 trees that produced 300 barrels of Baldwin apples, in each of the years 1850 and 1852. This is certainly an extraordinary yield, and would seem to warrant almost any amount of cultivation. I think the public would like to know some more of the particulars about this orchard. How the trees were set out upon the ground? How far apart, whether the ground was all shaded, by the trees, or whether they were standing more open, admitting the sun more freely? How much ground did they stand on? Did those standing near the wall bear any better than those in the centre of the lot? What kind of soil? &c., &c. Because it is doubted by some whether it is best to cultivate so highly. It is thought that forcing the tree beyond its natural and healthy powers, will be injurious to its longevity and future productiveness.

It is thought by many, that fruit trees are forced too much at the present day, more especially apple trees; pear trees will bear a higher state of cultivation.

In support of this theory, it is asserted that vegetables, if cultivated too highly, will not bear fruit; potatoes will run all to vine, corn to stalk, &c. Animals may be fed too highly, wear out and become useless in a short time. Stage horses are soon used up, and even cows when forced to yield three pounds of butter a day for one season, are seldom heard of afterwards.

We think that young apple trees should not be forced with very rich manure. If the ground around the trees, from 2 to 6 feet, according to the age of the tree, be kept cultivated and free from weeds, if a quantity of mulch, or meadow-hay be placed about it, the weeds will be kept from growing, and the hay will be sufficient manure. We think we have seen trees that have been forced and driven too fast, especially peach trees; at least the fruit on them was scarce.

Some flourishing peach orchards, in this neighborhood, have been rooted up, and burnt, on account of the disappointment of the owners.

Trees, when forced so much beyond the natural and healthy growth designed by the Author of Nature, are much more liable to be affected by the cold of winter. The tender and succulent growth of the wood will not get sufficiently hardened to resist the frosty weather.

Young apple trees were injured, in this region, in the winter of 1850—1, on the north side of the tree; the most thrifty and latest growth were the most affected, and more on the north side of the hill than the south; and mostly confined to elevated grounds.

Topsfield.

x.

For the New England Farmer.

EARLY RADISHES AND TURNIPS.

BY DR. JOSEPH REYNOLDS.

The soil of gardens that have long been cultivated becomes filled with worms that interfere greatly with the production of early vegetables. Radishes and turnips, of all sorts, and lately beets, are so much infested by worms, that it is exceedingly difficult to obtain them fit for the table in the early part of the season. They are so perforated by worms, and so knotty, that they are unfit for use, and many persons who are fond of them have ceased all attempts to cultivate them. It is very well known to every farmer, that we can raise good turnips of various kinds, from seed sown in August, upon land upon which turnips sown in April would be of no value whatever. Now most of the worms which prey upon our vegetables spend a portion of their lives in eating and growing, preparatory to a change of form. It is during this eating period, which occurs in the spring and early part of summer, that they are so destructive. After this period, they either assume the form of winged insects and fly away, or are busy depositing their eggs and forming their cocoons for the coming winter. After worms attain their full growth, their depredations usually cease. To this there may be exceptions, as the worm that feeds upon the tubers of the potato, until late in the fall. But most worms cease their depredations upon roots before the middle of July, many even before the end of June.

Now, Mr. Editor, any man will confer a great favor upon the lovers of good vegetables, who will tell us how to prevent the invasion of these insects even upon our early radishes and turnips, to say nothing about those clay colored villains who steal out in the darkness of night, and cut off our early cabbage plants and cauliflowers, with such malicious delight, and when daylight approaches, sneak back into their hiding-places. I have thought a good deal about this matter, and have made some experiments with relation to it, at different times. In a piece of ground where worms had injured the potatoes very much, I planted them, manuring the alternate rows with compost manure and with plaster. The potatoes that were manured with plaster alone were smooth and fair, and of fine quality, while those that grew in the rows manured with compost were rendered almost worthless by the worms. I have noticed that seed corn steeped in a solution of saltpetre and dried by being mixed with plaster is seldom attacked by the cutworm.

Worms do not abound in sandy soils, and they are rarely found in clay. Soils containing a large amount of *humus*, which consists of decayed vegetable and animal matter, are those in which "they most do congregate." This affords them the pabulum which they require. Such are the soils of our gardens. By the application of large quantities of compost, year after year, they have become rich in this element, and are thus doubtless better adapted to the production of the greater number of vegetables, than they could be rendered by any other means. But the gardener does not require a uniform soil. He needs perhaps half a dozen different soils, and as many different kinds of manure, within his little enclosure, it may be, of only a few square rods. But this subject is too prolific to be entered upon here. Perhaps upon some

other occasion, I may give you some thoughts upon it. What I would say now is, that I have raised very good radishes, smooth and fair, in an old wormy garden in the following way. Dig a trench, four feet wide and 10 or 12 inches deep, throwing out all the soil to that depth. Then set boards edgewise against the sides of the trench. This will not only prevent the sides from caving in, but prevent the incoming of worms from the adjacent soils. Then with a mixture of equal parts of sand and clay fill the trench to within two inches of the surface. Let these be well incorporated together. Then manure with fresh cow manure, and work it into the mixture thoroughly; sow your radishes, and you will seldom if ever fail to get a fine crop. If it is an object to get them very early, let the boards around the sides of the trench protrude four or five inches above the surface, and cover with glass.

Such a bed will last two or three years, when it should be renewed. In the same way early turnips may be raised; but as these are wanted in larger quantity, and of course require more ground, I have adopted a different course with them, and with good success. Take six parts wood ashes, one part air-slacked lime, one part plaster, mix them well together, and sow the mixture upon the plowed surface; work it in well with a rake. Then with the hoe form the surface into slightly elevated ridges, sow the seed, and cover with the rake. Use no other manure. If the small black fly, which is so great an enemy to the early turnip, attacks them, sift ashes freely over them just before a rain, or at sundown after the dew has begun to fall, and unless the season shall be very dry, you will get a good proportion of fair, eatable turnips, not indeed like turnips grown in September and October, but very much better than the early turnips usually grown in our gardens.

Concord, May, 1853.

For the New England Farmer.

YARROW, OR WILD CAMOMILE.

I would be obliged to you or some of your contributors for information relative to the destroying that pestiferous weed, "Yarrow, or Wild Camomile," without plowing; and whether it could not be destroyed by some chemical agent, instead of pulling. My reason for the above is; that my irrigated meadows are beginning to be attacked, though not so liable as where the water seldom runs, and which we have no desire to plow. There is another called "Pigeon weed" in parts of this settlement, but it has not made its appearance here yet; it is spoken of by those who know it to be worse than the yarrow, grows tall and strong, and the seed quick to vegetate. If known by this name to any of your correspondents, I would also like to hear about it as above.

M. A. WILSON.

*Fonthill Nursery,
near Freeport, Penn. }*

HORTICULTURAL EXHIBITION AT CONCORD.—We are informed that the enterprising citizens of Concord, the old battle town, will have an exhibition of fruits, vegetables and flowers, to take place, as the season may warrant, on the 11th or 18th of June. Committees of ladies and gentlemen

have been appointed to make the necessary arrangements, and we doubt not they will make it an occasion worthy the reputation of that ancient and time-honored old town. It is expected that the citizens, generally, will contribute to the exhibition, which will be free and open to all who may choose to attend.

THE SOD AND SUBSOIL PLOW.

One of these plows, from the warehouse of Rugles, Nourse, Mason & Co., of Boston, was in operation on the farm of H. F. French, Esq., of Exeter, last Monday. Many of our best farmers were present, and with one voice pronounced it a decided improvement on any breaking up plow they had ever seen. It is the same implement known in many places as "*the Michigan double plow*." It is like an ordinary sward plow, with another smaller plow set in the beam, forward of the larger. The forward plow cuts a shallow furrow, turning the sod merely, while the other turns the rest of the furrow upon the inverted sod. Both plows may be gauged to any desired depth. Upon Mr. French's land, a sandy loam, the forward plow turned four inches, and the large plow seven inches, making a clean furrow of fully ELEVEN inches depth, and FIFTEEN inches-width, by repeated measurement. The land when plowed had the appearance of finely pulverized old ground, no vestige of sward or grass roots being visible. It is found that no greater strength is required to draw the double plow, than the common plow, the splitting of the furrow-slice lessening very much the friction upon the mould-board. Four oxen were abundantly sufficient to do the work as above stated. The plow used was the Eagle, No. 35. The advantages of such a plow, in effectually subduing with grass, in lightening the labor of planting and hoeing, and in turning over meadows in order to lay them down at once to grass, are obvious from the facts already stated.—*Exeter News Letter*.

REMARKS.—We have several times seen these plows in operation, as well as examined their peculiar make. The curve of the skim-plow, or forward mould-board, is such as to turn directly upside down the turf which it cuts up. The turn of the rear mould-board is very beautiful, and being constructed upon strictly mathematical principles, offers the least possible resistance to the earth against which it is pressing. Although curving, as a whole so as to roll the subsoil over and completely cover the turf which the skim-plow had covered, it is in fact a series of straight lines upon which the soil moves easily away until deposited where desired. A stick with a straight edge may be laid along this mould-board, in various ways, so that the light will scarcely be admitted under it, strange as it may seem. The adjustment of the forward mould-board to the beam is one of extra strength and convenience, by which various depths of work are easily and expeditiously secured.

The forward mould-board overturns the entire sod as wide as the working of the rear mould, and

so places it in the channel previously made, as in no case whatever to be brought to the surface by the harrow or other implement of after cultivation.

The rear mould-board takes up the under soil and sifts it over the inverted sod, entirely filling the surface, and at the same time disintegrating and mellowing the earth so thoroughly that the plowed land requires little or no harrowing to fit it for the reception of seed, and in free loams the use of the harrow or other instruments, as pulverizers, is dispensed with.

The draught of the plow is remarkably light, considering the great amount of work and the thorough pulverization effected by it.

COMPARISON BETWEEN OX & HORSE LABOR FOR THE FARM.

Some time ago we published a communication containing the experience of Mr. Geo. Dewy, of Hanover, upon this subject. The practical value of that article found for it a place in nearly every agricultural journal in the country. In a late number of the *Wisconsin and Iowa Farmer*, we find another calculation arriving at similar results. It is well worth the consideration of the farmer. We are well aware of the attraction that a fine span of horses has for the young farmer. The motion of the horses is more congenial to young blood or to fast blood. The movement of cattle is generally slow and sleepy compared to the life and energy of the movement of the horse. Then a fine span of horses has a more noble appearance, especially when taken from the plow and driven to the street. It is pleasant too, once in a while to be able to convert the spirited plow team, into a spanking pair for the pleasure carriage. But the advantages in favor of the use of oxen for farm labor are such as renders it difficult to dispense with them. The pros and cons may be summed up in three propositions.

1. The yoke of good oxen, with good care will do as much work annually as the span of horses.
2. The oxen improve in value, or at least do not diminish, until at the close of their labor they are still as valuable for beef as when at five or six years old; while the horse is, at twelve, materially depreciate in value, and in a few years more becomes a burden, only to be thrown off by the axe.
3. The first cost of oxen and fixings is less than that of horses, and the annual cost of keeping, and the general wear and tear is less by one third or two fifths.

Under these considerations quite a profitable difference in favor of the use of oxen is cyphered out.

The writer whose statement we exhibit, assumes the cost of a good pair of horses to be \$200, and their harnesses \$25, making \$225, the interest of which at 7 per cent makes \$15.75. It costs to feed, for grain, \$68.50, and for hay, \$48.00, making the entire annual cost \$132.25. A yoke of good oxen, yoke and chains cost \$110, which at 7 per cent interest is \$7.70:—grain to feed costs \$34.35, and hay \$48, making the annual cost of a yoke of oxen \$89.95.

At these rates per annum the account is kept for ten years with the same set of animals.

Keeping one pair of horses, at \$132,25.....	\$1322,50
Shoeing, at \$12 per annum.....	120,00
Total.....	\$1441,50
Keeping one yoke of oxen ten years, at \$89,95.....	\$899,50
Shoeing, at \$5 per annum.....	50,00
Total.....	\$949,50

At this time the yoke of oxen are worth for beef \$80,00, which being taken from the cost of the ox labor for the ten years.

Considering the pair of horses at fourteen worth \$125, this sum is to be taken from the cost of horse labor which reduces that sum to

Cost of horse labor.....	\$1327,50
Cost of ox labor.....	869,50
	\$448,00

In ten years then the farmer is better in his standing by \$448, by the use of oxen instead of horses for farm work.—*Granite Farmer.*

WASH FROM THE SINK.

There is probably no article that can be applied to growing vegetables, more decidedly valuable, than the wash from the sink spout. And yet this is not generally understood by farmers, and few efforts are made even by the most economical, to economize an article in which are to be found all the elements which contribute to the sustenance of vegetables in a state of perfect solution, and consequently in a condition the most readily appropriable by the organs they are designed to nourish, invigorate and sustain.

It has been computed by chemical men that the amount of *pabulum*, or alimentary matter, contained in the urine of animals, is equal to that of the solid voidings. It has also been asserted that one hoghead of soap-suds, if applied in irrigation, would produce effects upon the corn crop as obvious and enduring, as those resulting from a cord of, the best manure. This assertion is, perhaps, erroneous; but that the effects of the article applied in the manner specified, would be highly salutary, no one who has witnessed the effects of soap-suds upon cucumbers, squashes, house plants, &c., can indulge a doubt. But the most economical method, probably, of saving and appropriating this liquid to the purposes of vegetable enrichment, is to mix it with the materials of the compost heap. Any substance which will absorb it, may be made a vehicle for conveying it to the fields, such as swamp muck, which, in a dry state, readily absorbs three times its weight of water, loam, old tan, rotten leaves, straw or saw dust, all of which are highly valuable, and act favorably both on the soil and crop.

If it is found inconvenient to convey the sink waste to the piggery or barn cellar, dig a hole near the house six feet square, and two or three feet deep, according to the amount of water from the sink. If this is designed as a permanent arrangement, it would be well to stone or brick it and cover the bottom and sides with water cement. But

it will answer very well without either, by laying some old timber, joist or stones round the edge, and banking the earth up against it so that it may be covered up and not be offensive to the sight or smell.

On the bottom of this, lay meadow mud, straw leaves, weeds, or common loam, and let the water on. These materials should be frequently supplied in small quantities until the place is full, when it may be carted away and the operation continued.

A farmer who has adopted this plan, thinks he can make by it at least, twenty dollars' worth of the best of manure in a year, though the operations of the kitchen are limited, the family being small.

"TIRED OF FARMING."

A few months ago, a man who had been a farmer from his early life, came to the city to buy stoves to sell again. Said he to the stove dealer, "the weevil begins to infest the wheat, and all things considered, I am 'tired of farming,' and so have sold my farm." The stove dealer remarked, that he thought within himself, that just as like as not the discontented farmer would find a weevil in the heart of the new business—and so it proved, for when the day arrived on which the note matured, given for the stoves, the old farmer, now turned tradesman, confessed that he had not been able to sell his stoves—that he had most of them on hand.

"Tired of farming," the most independent business a man can engage in, because, forsooth, there are disappointments, and perplexities, and trials, and vexations, attending it. Remember, you who are tillers of the soil, that your cares and troubles and anxieties are few and far between, compared with those suffered by commercial men. If your chances to become rich are not so inviting and profitable, as those of the tradesman, bear in mind that the dangers of being very poor and destitute are far less. Famine and abject poverty seldom overtake the farmer, or haunt him in their ghostly visits. He lives on the high table-land of promise, rising far above the murky region of want and destitution. His children can say there is bread enough in our father's house, and a piece to spare to the hungry of other less fortunate callings.

"Tired of farming!" Supposing you are.—What is to be done in such a case? Do you expect to find an employment without trials and perplexities? If so, you are doomed to disappointment. There is no vocation in this world that will exempt those who engage therein, from cares and fears and vexations. So if you are tired of farming, the best way is to get rested just as soon as you can, and prosecute anew the business for which you were early trained, and which, if diligently followed, will yield a good supply of all the necessities and comforts of life, together with opportunities for mental and moral culture.—*Rural New-Yorker.*

FRANKLIN COUNTY SOCIETY.—Through the politeness of Hon. H. W. CUSHMAN, we have received the Transactions of this Society for the year 1852.

The Annual Exhibition was at Greenfield, on the 29th and 30th September. The Address by Prof. MAPES,—practical, concise, clear and excellent. The reports of Committees and Treasurer's report show a prosperous condition of the society. The committee on "fine arts, fancy articles, &c.," was composed, mostly of ladies—right—why was not the committee on "carpeting, rugs, flannel, &c.," made up in the same manner!

The pamphlet is well compiled, printed handsomely, and reflects credit on the society.

COWS AND OXEN IN PORTUGAL.

The Secretary of the N. Y. State Society has favored us with the following extract from a letter from C. B. Haddock, the United States Charge d'Affaires to Portugal.

Oxen, strange as it seems, are almost exclusively employed in agriculture; nor do they appear to feel the heat much. Indeed the Portuguese have a kind of Hindoo respect for the bovine race, and always treat them well. I never, in any country, saw oxen and cows so universally fat and healthy in appearance. During the winter, though there was not a single frost, the cows driven into the street, in which I live, and milked there every morning at the doors of their customers, were generally covered with warm woolen blankets. Oxen are often protected from rain and flies by an oilcloth, covering them from the hips. I every day see a beautiful ox belonging to the Duke Palmella, and used to draw water in a hogshead, upon wheels, covered entirely with a canvass awning, raised in an arch over the shaft of his cart. Like the snail, the happy fellow carries his house with him. And both oxen and cows are so trained it is curious to see them. The cow is as tame, as easily handled, as quiet, whilst women or children are playing with its horns, as a pet dog. The calf is driven to town with its mother, and learns to go through all the operations which are to be the future business of its humble life, whilst it is thus, with its nose muzzled, following the herd of milk kine. It is called and sent off at will, with a word. Oxen are driven by a man, who goes before them, and sometimes between their horns even; he turns his face to them and brads them with his long goad-stick in the side or the flanks; or he takes hold of a rope which unites their horns, and leads them as we lead a horse. These animals are the peasant's pride, and are often decked with ribbons and bells. I saw, at the October fair, at "Campo Grande," near Lisbon, more than a thousand yoke, many of them splendid animals, and all gaudily ornamented, and driven by men as gaily attired as themselves.

The yoke, what an instrument that is! and the cart, and the plow. These man makes; God makes the oxen. The yoke is a straight piece of chestnut wood, about four inches by two and a half, slightly hollowed, where it lies upon the neck; it has two straight pins, a foot long, running from it, at right angles, where is put the bow, and united under the animal's neck by a bit of rope, or thong of green hide. The rude implement is confined to the tongue of the cart with ropes, and to the horns with thongs. Unyoking is untying the strips which unite the pins under

the neck, and those upon the horns. And as the tongue of the cart is fastened to the body, tipping up carries up tongue and yoke together, and leaves the oxen all ungear below. The cart has solid wheels, about three feet high, and from four to six inches thick, with a fixed axle, that turns, of course, with a wheel. The body and tongue are framed together, and are confined to the axle by pins, between which it revolves with a noise, frequently, that may be heard for a mile. Now and then the axle is oiled, but not generally; the "stridentia planstra" of Virgil is recalled to you upon every public road. The plow is even ante-Roman; ruder than Virgil describes. The beam extends to the yoke, and is fastened to it with cords. The same stick serves for share, coulter and handle, and is morticed to the beam at not quite a right angle. It is generally pointed with iron. The harrow and hoe are similarly rude.

And yet, with such instruments the fields are made to yield abundantly. Beautiful crops of barley, wheat, Indian corn, and potatoes cover them on every side. Saving of labor seems hardly an object. Men work for fifteen cents a day and find themselves.

STATE BOARD OF AGRICULTURE.

SEVENTH MEETING.

The Board was called to order by his Excellency, Gov. CLIFFORD, the roll called and the proceedings of the last meeting read by the Secretary, Mr. C. L. FLINT. Present, Gov. CLIFFORD, Mr. WRIGHT, Secretary of State, Messrs. WILDER, FRENCH, PROCTOR, SPRAGUE, HITCHCOCK, NASH, PARKHURST, LAWTON, REED, BROWN, WOOD, DODGE, PAIGE and SMITH.

The Secretary was directed to confer with the Sergeant-at-Arms, and make arrangements for a room for the accommodation of the meeting tomorrow.

Mr. WILDER distributed the Transactions of the Norfolk Agricultural Society, among the members of the Board.

Mr. PROCTOR, from the Committee in relation to a *State Chemist*, reported as follows:—

The committee, instructed to report on the expediency of employing a *State Chemist*, for the analysis of soils and other experiments connected with culture:—fully impressed with the importance of such operations and the knowledge to be derived from them;—are still of the opinion that the time has not yet arrived, when it will be expedient to recommend any distinct action on the subject.

Mr. PROCTOR also reported as follows on the subject of *Farmers' Institutes*:—

The committee to whom was referred the proposition for the establishment of *Farmer's Institutes* in the several counties of the Commonwealth, analogous to the teachers' institutes, that have been holden with so much favor, have considered the subject, and entertain an opinion favorable to the proposal.

It seems, if assemblages of farmers, and others interested, could be had in connection with the movements of the several county societies, and in a measure co-operating with these societies, their influence might be beneficially extended. Especially would these meetings be beneficial, in enlisting the co-operation of young men. There are some things which can be better done by the energy and ardor of youth, than in any other manner. Without presuming to dictate the particular mode of organization, they are content to recommend such organization to the favorable consideration of the Board; not doubting that the secretary will be able to devise a plan of particulars, that will secure all the benefits reasonably to be expected.

The only experiment of the kind, within the knowledge of the committee, was that which took place in March last, at Concord, County of Middlesex; which succeeded to the admiration of all who witnessed it.

On motion of Mr. SPRAGUE, the report was re-committed to the committee, to which, Mr. FLINT, the Secretary, was added.

The Secretary laid before the Board circulars and tables which he had prepared, to be circulated throughout the State, in order to elicit more exact information in relation to the agricultural resources of the State. An interesting discussion took place upon these papers, and they were referred to a committee consisting of Messrs. PROCTOR, FLINT, DODGE, PAIGE and FRENCH.

The Governor here called Mr. WILDER to the chair, who continued to preside throughout the day.

The officer having in charge the publication of the Transactions of the counties, was instructed to cause one thousand copies of the Transactions of the Board to be struck off and bound separately.

Messrs. REED, HITCHCOCK and PAIGE, were appointed a committee to report what action is necessary to facilitate the objects of Prof. NASH's visit to Europe.

Mr. PROCTOR moved that a delegate from this Board be appointed, to visit each of the County Agricultural Societies in the State; which was done as follows: To visit the county of

Worcester.....	STEPHEN REED.
Norfolk.....	J. H. W. PAIGE.
Essex.....	HARVEY DODGE.
Housatonic.....	EDWARD HITCHCOCK.
Worcester West.....	BETH SPRAGUE.
Bristol.....	M. F. WILDER.
Middlesex.....	B. V. FRENCH.
Berkshire.....	ELISHA HUNTINGTON.
Plymouth.....	H. M. WRIGHT.
Franklin.....	J. W. PROCTOR.
Barnstable.....	JOSEPH E. LAWTON.
Hampshire, Franklin and Hampden.....	SIMON BROWN.
Hampden.....	JOSEPH SMITH, C. B. H. FRENCH.
Hampshire.....	JOHN C. GRAY.

It was voted that the gentlemen elected as delegates shall attend, person-

ally, and report, or send a member of the Board as a substitute.

Messrs. BROWN, FLINT and REED, were appointed a committee to collect the names of the officers of the several Societies, and the places at which the next exhibition of each is to be holden.

AFTERNOON SESSION.

Messrs. SMITH and FLINT were elected a committee on accounts.

The committee on the subject of the blanks reported by the Secretary, approved of the forms, but left them open for such modifications as might be deemed appropriate by the Secretary.

The Secretary, in connection with the Ex. Com., was directed to furnish subjects for Essays, and members of the Board requested to select from them and report at the next meeting at the close of the year.

The following paper from a committee was then accepted:

*State Board of Agriculture }
Boston, May 11, 1853. }*

Whereas, the Rev. JOHN A. NASH, Professor of Theoretical and Practical Agriculture in Amherst College, and a member of this Board, is about to visit England and other countries of Europe, for the purpose of gaining information relating to the science and practice of Agriculture, this Board takes pleasure in testifying to the high personal character and the scientific attainments of Professor NASH, and to his zeal in the cause to which he has devoted himself; and cordially commend him to the kind regards of the scientific and practical agriculturists, and of all agricultural associations in the countries which he is about to visit.

THURSDAY MORNING.

His Excellency, the Gov., being engaged in his official duties, Col. WILDER was requested to resume the chair.

The proceedings of Wednesday were then read.

On motion of Mr. FRENCH, it was voted that a bushel of sound, merchantable corn, shall be considered by all the societies to consist of fifty-six lbs. of shelled corn weighed at any time before the 30th of November, and that 80 lbs. shall be considered a bushel on the cob when taken from the field.

A bushel of rye.....	54 lbs.
" barley.....	46 lbs.
" buckwheat.....	46 lbs.
" oats.....	30 lbs.
" wheat.....	60 lbs.
" potatoes.....	60 lbs.
" carrots.....	55 lbs.
" sugar beets.....	60 lbs.
" mangold wurtzel.....	60 lbs.
" ruta baga.....	60 lbs.
" parsnips.....	45 lbs.
" English turnips.....	50 lbs.
" white beans.....	60 lbs.
" peas.....	60 lbs.
" onions.....	50 lbs.

The Secretary was directed to notify the Agricultural Societies of this vote, and request them to conform to it as soon as their circumstances will permit.

Messrs. WILDER, PAIGE, PROCTOR, HITCHCOCK,

SMITH, DODGE, FRENCH, BROWN, SPRAGUE and LAWTON were appointed a committee to confer with the Governor of the Commonwealth and consider and report whether any, and if so what aid may conveniently be afforded by the State to this Board to facilitate experiments in scientific cultivation of the soil by the use of the lands connected with the State Reform School at Westboro'.

Messrs. FRENCH, SPRAGUE and WILDER were appointed a committee to audit the accounts of the late acting Secretary.

Messrs. WILDER and BROWN were added to the Executive Committee.

At 2 o'clock the Board adjourned.

For the New England Farmer.

NEW AND UNTRIED SCHEMES.

"So far as possible, the established and endowed institutions for education, and all the usual means of improvement at command, should be made available to the advancement of the agricultural interest, instead of looking for new and untried schemes."—*Reviewer in N. E. Farmer of April 30, 1853.*

The above cautious remarks are made in the review of the monthly number of the *Farmer* for April, in the paragraph captioned "Farmers' Libraries."

In order to assume a position in this matter, and have a fair starting point from which to reckon on our latitude and longitude, we should like to know what our incog friend means by "new and untried schemes." He seems to admit as a fact, that "our established and endowed institutions for education, and all the usual means at command, should be made available for the advancement of the agricultural interest." To this we respond a hearty amen! But when or where has this been done? It is now but a few years since the application of science to agriculture has received the least attention in our country. It is yet the opinion of too many, that ignorance in these matters is a befitting quality in the cultivator of the soil, although the mass, we hope, have risen far above so grovelling a view of things, and many are anxious to see a better order of things introduced; and to effect it, are willing, with the same nobleness of purpose as led Columbus to venture on unknown seas in search of a new world—to venture "on new and untried schemes." Agricultural schools have been the subject of much consideration, and their effect on those who could be benefited by them would probably be of a salutary character. But the public mind does not yet (it will be, however, some time), seem prepared for their endowment. Agricultural professorships, as a remedy, are being introduced into some of our colleges. The effect will, no doubt, be a good one. But at present it is a "new and untried scheme," even in our "established and endowed institutions for education." We hope the scheme will prove so successful and its benefits so fully appreciated, that every college in the land will find such a professorship a necessary appendage, and that the cultivation of the soil will be taught *practically* as well as theoretically at all such institutions. And our *academies*, too, and "all our higher seminaries of learning," whatever name they bear, what a beautiful idea it would be if they would arise and elevate themselves into a new atmosphere and shine forth by richly developing

the mysteries of seed time and harvest, and unfolding all the beautiful knowledge drawn from natural laws connected therewith. Yet most of these "usual means of improvement" would of necessity have to venture upon "new and untried schemes."

We have often thought that science as connected with agriculture might be successfully taught, to a limited extent, in our common schools, which are accessible to every child in the country. We are now of the same opinion. If nothing more was done in these humble seminaries than by occasional *talkings* of the teacher to interest the mind of the scholar in natural objects by pointing out their uses and defining their beauties and calling them by their right names, the curiosity would be awakened so that a research into these things, to continue through life—widening and deepening and presenting new attractions all the way through life—would by the result, and from so humble a beginning invaluable consequences would necessarily arise. But the thing has never, to our knowledge, been done so as to give a fair result of the experiment; consequently, it would be venturing upon a "new and untried scheme," which many in the outset would pronounce visionary and false to attempt the innovation.

Almost half a century ago, a few individuals away back on the Berkshire hills, established a society for the promotion of agriculture and domestic manufactures. The first beginning in this affair was *very small*. Farmers shook their heads and thought no good would come out of the matter. Others thought the project visionary, and that if it did not end in smoke, its greatest result would be wind. It was a scheme *wholly* new and untried, and in order to get up the first exhibition, if we have been rightly informed, the few who managed the affair borrowed of their neighbors in order to increase the number of articles comprising a small exhibition. Still they persevered, and saw the dark clouds of discouragement pass away, and now the number of such institutions in the land are almost innumerable, while the benefits resulting from them defy calculation. Berkshire numbers two within her borders, each of them in flourishing condition, calling each year thousands from the hills and valleys to their annual fairs, and each one come in the strength of zeal and fullness of admiration which attends the progress of a desirable and favorite object.

When the experiment of sustaining agricultural societies was fully tested and their utility had become a fixed fact, another new and untried scheme presented itself to the consideration of the cultivators of the earth. Horticulture had thus far been under the fostering care of a few individuals.—Choice fruits, healthful vegetables in abundant supply, and rare and beautiful flowers, were restricted in their growth to the gardens of wealth and taste, while the thought that they were intended for the multitude had never entered into the heart of man. But the union of effort which had given agricultural associations success, and had given new impulse to agricultural progress, was seen to be good and lovely in its operations, and its aid was invoked in behalf of horticulture. The Massachusetts Horticultural Society is an imperishable monument of the success which such effort brings; and numerous similar, though humble institutions, spread all around us, are now

each year feasting the eye with new beauties and regaling the taste with still more delicious fruits.

One more new and untried scheme upon which the farmer has ventured, and we are done. This is patronizing and sustaining the agricultural press. Almost one-fourth of the nineteenth century had passed away when the first agricultural paper made its appearance in America; and it is not probable that one in a hundred of the farmers saw such a paper, or one in fifty knew of its existence, for years after its first issue. By the many it was looked upon as a regular humbug, fresh from the city. But it lived,—its circulation increased, it was read and re-read. The demand came for more, and now not less than a dozen similar papers, each of high character, are issuing in various sections of the country, besides a host of smaller fry, whose columns are in part devoted, professedly, to the same object of giving agricultural knowledge. We might go further, but we promised to stop, and therefore forbear, only hoping that agricultural lyceums and farmers' clubs, or whatever name they may bear, will be multiplied until their numbers become as plenty as the locusts of Egypt, and that every lyceum or club will have its library and cabinet, and every other appendage necessary or convenient for intellectual progress in the arts so essential to the well being of mankind at large.

Yours truly,
Elmwood, May 6, 1853.

W. B.

For the New England Farmer.

OXEN AND HORSES.

BY M. M. FISKE.

MESSRS. EDITORS:—Having read an article in your paper of Jan. 1st, which advocated the superiority of oxen over horses for farming purposes, and having some leisure time which could not be employed to better advantage, I have thought proper to offer the following remarks.

The ox is certainly a noble animal, his species being one of the greatest blessings ever conferred upon man; and what will be more acceptable to our Creator for the above than to care and provide for such animals as are committed to our stewardship, as we would wish to be cared for under the same circumstances. Indeed, I firmly and religiously believe that it is a law of Heaven, designed for their special protection, that the benefit to be derived from their possession will be in exact proportion to the kindness and mercy exercised towards them.

To the farmer whose land is very rocky and uneven, oxen are indispensable; but to those whose soil is measurably smooth and easy of cultivation, the horse is decidedly preferable, whether for the profit of his labor or the pleasure of driving.

To ascertain the correctness of the above, we must calculate the cost of keeping for each, per week, and which will answer the best and greatest variety of purposes of the farmer.

A statement was published a few years since, by the Hon. B. V. FRENCH, of Braintree, in which he made the actual cost of keeping his horses per head, per week, to be \$1.50; this was probably when hay was lower than at present, but this fact will bear equally against the ox.

It is a common saying that a horse will eat as much, or more, than two cows, and that two

horses will eat as much as three oxen, and it may be so, but my experience gives entirely a different result. A pair of oxen weighing 3000 lbs. are by no means uncommon, as many such cattle are kept in this vicinity, and I have no hesitation in saying that such a pair will eat 700 lbs. of hay per week, if they are kept at labor during the fair weather, allowing them all the stormy weather for rest. To support this assertion by evidence, I would adduce the fact of an experiment being made in this town by two different men, whose names will be given if required, purchasing each a yoke of oxen, to accommodate the people of their vicinity with the labor of themselves and oxen at \$2.50 per day; they had work in such abundance that it was with difficulty they could keep their customers at peace with themselves and each other, as to whom they should first serve. Being obliged to purchase everything that their cattle eat, they could not get money enough to support them and their families, and were obliged to abandon the enterprise altogether.

Another case in point, is that of a friend who says he had not the least doubt of his making money by working out with his oxen at \$2.00 per day, until he purchased 600 lbs. of hay at \$1.00 per hundred, which was consumed by them alone in five and a half days.

A pair of horses weighing 2000 lbs. are of respectable size, and are as large as would be profitable for most farmers to keep. Now is it reasonable to suppose that it will cost as much to support 2000 lbs. of horse flesh, as 3000 lbs. of ox flesh? No sane man will say so, whose mind is free from prejudice. But it will be argued that oxen can be kept cheap in winter when they are idle; to this I would answer, so can a horse under the same circumstances. But neither should be kept to look at, as there is no reason, to my knowledge, why they should not with proper care in feeding, or driving, &c., work every fair day, as well as their owner or driver.

I have known some men to be dreadfully disturbed if their horses or oxen worked over 8 hours, or even that, in a day, while they could see their wives and daughters work sixteen or eighteen with the most perfect indifference.

Two horses harnessed side by side on a four wheel cart will haul as much manure as a yoke of oxen; on any common plain they will be fully equal, if not superior for plowing, and if the weather should be extremely warm, as it often is in the spring, the advantage is nearly two to one in favor of the horses.

An ox team of one yoke cannot be divided; the horses can; one can go to the mill or to the store, or to visit a sick friend, while the other is plowing out the corn, &c.; two teams can be made of them to cart hay, rake, &c.

Since writing the above, I have conversed with a number of citizens of this town, who use horses exclusively, and others who use both oxen and horses, upon the comparative expense of their keeping and value of their labor. The statements of some of these I will give, not desiring to be understood that the men whose names I shall mention are wise above all others, but that they will be considered as good authority, wherever they are known.

Mr. HARRISON EAMES keeps a pair of horses weighing about 2000 lbs.; cost of keeping per week

as near as he can estimate is \$3.00. These horses for a number of years have done all the work on his farm, (which is a good sized one,) in addition to a large amount of plowing, hauling manure, wood, &c., for his neighbors, being constantly employed either at home or abroad. These horses, when hitched to a dead pull, such as rocks, logs, &c., will draw equal to any oxen. Mr. Eames says he can plow two acres of common grass land in a day with his horses as quick as he could one and a quarter acres of the same with oxen.

Col. Wm. HASTINGS has a pair of horses whose weight is 2200 lbs.; cost of keeping, as near as he can estimate, per week, \$3.40. Keeps from one to three yokes of oxen—knows by experiment that a yoke of oxen of 3000 lbs. weight at labor, will consume 100 lbs. of good hay in 24 hours, and also that his horses will perform nearly or quite fifty per cent. more labor of almost any kind, than will the oxen.

Mr. BUCKLEY MOORES has a pair of horses whose weight is 2500 lbs.; cost of keeping, as near as he can estimate, per week, \$3.40. The performance of these horses upon any kind of work he feels safe in fixing at 75 per cent. more than any oxen in the vicinity. If he kept oxen he would be obliged to keep one horse; kept four oxen formerly, and but one horse, but found the cost of keeping much too large to leave any margin of profit. But by disposing of his oxen and purchasing another horse, the face of affairs was entirely changed, the span of horses doing all the work of the four oxen, at about one-third of the expense of keeping, besides doing the single horse's work of going to mill, store, meeting, &c.

Mr. F. CHILD's span of horses weighs 2000 lbs.; cost of keeping for five weeks, ending Feb. 28, was \$17.30, being per week, \$3.46. The greatest accuracy of the cost of keeping was obtained in this case, as Mr. C. purchases the whole of his hay and grain, whereas those of whom I have before made mention, produce everything necessary for the purpose, from their farms.

A loss of about 10 per cent. is sustained by those who purchase their hay as they need for present use, over those who take it in from the field. These horses are principally employed on the severest kind of labor, in hauling stones from the ledge of Messrs. Franklin Cloyes and brothers, to their different places of destination, often carrying 4500 lbs., besides the wagon, to Natick, a distance of about eight miles from the ledge, over a somewhat hilly road. The proceeds of the above five weeks' work was something over \$50.00, there being much bad weather and soft travelling. All of the above teams are in the finest working order.

Now if the above statements and calculations are correct, we have the following result, viz: that a pair of horses can be kept for about 37½ per cent. less than a pair of oxen, and will perform, on an average, at least, 37½ per cent. more labor.

It must be borne in mind that oxen cannot be kept at hard labor and high feed more than two years, before they will lose their appetite and strength, which can only be regained by a whole summer's good pasture and perfect freedom from labor. The cost of shoeing is nearly as much for oxen as for horses. No domestic animal is more beneficial to man, under certain circumstances, than the horse, and there are none which have suf-

fered more from his cruelty. In all ages of the world, and in all stages of civilization and barbarity, he has been his esteemed favorite. To the shame of civilized men be it said, that the savage has ever been the kindest master. It is not uncommon to see some very professedly pious people, for the sake of five paltry dollars, dispose of a faithful old servant to some vagabond to be abused in the most shameful manner, and all this without the least compunction; such people may possess great piety, but it is not so great as their avarice. In times of danger and distress what more faithful and efficient friend! And it is then that we can in some measure appreciate the feelings of Shakespeare's Richard the Third, when his kingdom was considered to be of the lesser value.

Yours truly, M. M. FISKE.

Framingham, April 2, 1853.

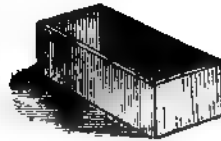
REMARKS.—Many thanks, friend FISKE, for the above excellent article. Your declaration in the outset, that you could not better employ your leisure than in giving expression to your thoughts on this subject, was correct. We have no doubt thousands will be influenced by these opinions. Let us have more of them on other topics.

GRAFTING.

At a meeting of several gentlemen of the Horticultural Society, on the 29th of January, the subject discussed was "*The Cultivation of the Pear.*" The discussion is pretty fully reported by Mr. Hovey in his Magazine. Mr. WALKER said, "great errors were committed in grafting trees; some persons took off the whole top of a large tree, and then large quantities of suckers are thrown out below the graft; many of his friends had cut them off as fast as they appeared; the consequence was that the grafts failed, or the trees died. Thus, he said, it would always be; for if you continue to bleed trees every week they cannot live."

These remarks apply to the apple, as well as pear tree. We believe the practice of cutting off the entire top of an apple tree at once, a bad one. It leaves a large amount of vigorous roots with nothing to balance them; nothing to receive the great flow of sap which the roots are constantly sending up. The tree, then, in order to equalize its powers, throws out great numbers of suckers—these are cut off, and another set is started, and the struggle goes on between the tree and the man with the jack-knife, until the tree knocks under and dies. If any trees survive this operation, it must be attributed to the kindness and persistence of nature, and not to any discernment of the operator.

REMEDY FOR THE ONION WORM.—"A Farmer's Daughter," in the *Maine Farmer*, says the common poppy growing among the onions will prevent attacks of the worm. When the poppy plants become too numerous or strong, pull them up and leave the uprooted stalks on the bed.



2.

3.

PHILPS' BEE-HIVE.

We have had no experience with this hive, but give the description of the inventor, that those interested may judge for themselves. Address E. W. PHILPS, Westfield, Mass.

Figure 1 is a view of the back of the hive, with the lid or cover raised, and the rear door opened, showing the arrangement of the main boxes, and also the top boxes. Each of the large boxes is constructed with a pane of glass, 7 by 9, for the back side, by which an opportunity is afforded to learn the number and condition of the bees, with the amount of honey and of wax. Each of these boxes communicates with those on either side, as shown by the next figure.

Figure 2 represents one of the large boxes. The slide, *g*, closes the communication between the boxes, which consists of a narrow slot a few inches in length, as seen on the interior, on the right side of the box. This slide turns upon a screw pivot near the bottom of the box. A slot on this side corresponds with that on the box, when fixed in the proper position for opening the communication.

Figure 3 is one of the small boxes, which is to be placed on the top of the large or main box, and connects with it by means of the circular holes noticed in the second figure. The top of the small

box is also covered with glass. When filled with honey, the large boxes contain about 30 lbs., and the small boxes from 8 to 10 lbs. each. The upper ones may be removed when filled, as also the large ones.

The patentee claims for it the following important advantages:

1. It is adapted to either large or small colonies, as the bees occupy from one to six boxes (or sections,) as their numbers may require, and thereby give them at all times as much or as little room as they may need at each and all seasons of the year.

2. It affords the best facilities for observing the operations of the bees, for ascertaining the amount of honey stored, and the strength and condition of the colony, without the least exposure to the bees.

3. The arrangement for removing the old brood combs, (so essential to keep a colony in health and vigor,) and for removing the surplus honey, are equalled by no other hive, as the bees may be made to leave either box before removing it from its place in the hive.

4. It is decidedly the best non-swarmling hive ever invented, as colonies may be divided and multiplied without the trouble and uncertainty of swarming; or swarming may be prevented, by giving ample room, and taking the surplus honey as fast as gathered.

5. It is also the best swarming hive, as the

bees may be confined to a small amount of room during the fore part of the season, and thereby induced to swarm early, after which more room may be given them, so as to prevent their clustering on the outside of the hive, and a much larger amount of honey obtained than in any other hive.

6. It affords the bees better protection against the ravages of the moth and miller, and the apiarian better and more effectual means to destroy them after they have entered the hive, than any other.

7. Each section is well ventilated, and the bottom, when closed, is proof against the miller, but being attached by butts, may be let down and cleaned at pleasure.

8. The bees are better protected against the attacks of both robber-bees and millers in this hive than in any other.

9. It affords better accommodations for feeding either late swarms, or for obtaining honey, as the arrangement is such that for robbers to gain access to the feeding apparatus, they must enter a small passage at the spout, and pass directly through the main body of the hive.

For the New England Farmer.

THE MONTHLY FARMER FOR MAY,

With its forty-eight double-columned pages, filled with some seventy-five articles, on perhaps twice as many subjects, and with "pictures to match," is rather a lusty subject for review, to one who has not yet finished his planting, and who has lost his "literary hours," by having the evenings cut off from the night and tacked on to the skirts of the day. Yet as I do not like to give up the privilege of a little chat with the readers and writers of the *Farmer*, I will begin with,

THE FIRST TEN PAGES.

Editorial hints on Grafting, Soiling, Corn, and Asparagus, everybody has read; but some of us have put off the suggestions till next year. The next article is a nut for the man to crack who knows all about plowing,—how and when. Passing articles on Millet, cultivation, yield, &c.; Spring; Bone Wens; Special Manures, with table of results, &c., we come to an article on Agricultural Chemistry that is well calculated for a sort of "third man" between the combatants on this subject. No matter whether you laughed or scowled, read it again. The writer puts spice in his things. Then comes a recommendation of white birch and white pine for hedges to turn cattle. How would currant bushes answer? A description, with cuts, of Emery's Reaping and Mowing Machine; Honey Bees; Poets, beat little end down; account, with engravings, of Guenon's mode of selecting cows by their "curls;" and More about Plowing, and our first decade is completed.

THE SECOND TEN PAGES.

Like the first, begin with editorial hints, in which the first principle of "Rawstone's Lancashire Farming" is, to drain off all *superfluous* water. I wish some "Thorough-draining" man would visit my place next August and point out a few specimens of this "superfluous water." Suggestions in Composting, not from England, nor from books, but from practice on a farm in Vermont; Choked Cattle, remedy and prevention; Cost of different kinds of Fences; Agricultural Papers; against Hilling

Corn, &c.; and cautions against buying foul seed, bring us to a New Brunswick, who complains that the name of his place is never seen in the *Farmer*. Mr. Taylor has given the right direction to his indignation. One-half of the world don't know how the other half lives; but such articles give us some clue to this knowledge. Cultivation of Fruit, recommended, but nothing said about bugs and worms. I am afraid the curculio will yet claim as great a share of our apples as it does of our plums. My apples for a year or two have been badly stung. Now comes another legislative discussion, on the division and fencing of farms, in the course of which objections are made to hedges, Guano, Wire Fences, &c. Another plan for Agricultural Education, and some observations on climate in other parts of the world, bring us to

THE THIRD TEN PAGES.

And here we have Birds of New England; a valuable article, the most pleasing sentence of which, however, is one near the bottom, in these words, "to be continued." Passing Remarks on Budding and Grafting, we have Manures Again,—a discussion of the question whether the nutriment which vegetables derive from the soil, may not, nearly all, be returned to the soil in the manure produced by feeding animals upon the vegetables. This is an important question. I am inclined to the opinion, that the cultivation of the earth gradually impoverishes the soil. Grafting on the Thorn, by a new correspondent, but an old orchardist, who has the independence to acknowledge a failure, and to publish it as a caution. In connection with the experience of Mr. Burt, (p. 204) I think Mr. Goodrich's article conclusive on the subject; certainly it is with me, for I happen to know that extra pains were taken with some of his thorn stalks. We will now jump over Live Fences; thank "R. B. H." for his account of Maryland Farming; just say that a "practitioner of medicine" recommends Sulphate of Zinc for one of the dairyman's afflictions, sore teats, and for other complaints; admire Farm Accounts, by which seventy-nine barrels of apples were picked, marketed, and the "lot" taken care of for \$7.50, and will call the valuable Analyses of Clam and Oyster Shells, by the State Geologist of New York, the last article in this division.

THE FOURTH TEN PAGES.

A discussion by our law-making farmers, on Farm Buildings. Then an Artisan tells us how a wooden house may be plastered and made to look like granite. Of all architectural absurdities, this plastering and streaking wooden houses in imitation of stone is the most ridiculous. Observations on spring work, by F. Holbrook, whose articles are rather to be done about than talked about.—In an article on "Shade Trees," the editor directs to "set in disorder, not in linear order." Are you sure of this being "good taste," Mr. Editor? I know Downing says so; but does that settle the question? "Follow nature." Ah! do not the honey bee and geometric spider follow nature? Does not the rainbow as it *arches* the heavens, or the thunderbolt as it *angles* across the dark cloud, follow nature? Would either of these become an object of greater admiration were it to abandon its geometric instinct, for the most commendable "disorder?" While a cow or a sheep might plant an orchard or a grove in utter confusion, may there

not be in man a principle or instinct that prompts him to the manifestation of order, proportion,—geometric figures, if you please, in those he plants? On riding past an orchard planted with mathematical precision, who does not experience sensations of pleasure, as the changing rows marshal themselves before his eyes, that disorder never excites. But enough of this. Passing on, we have more About Potatoes, in which several "Cures" are cured of all cure; the last legislative Agricultural meeting of the season; Shovel Making; Wealth of the United States; and Comments on Plaster.

LAST EIGHT PAGES

Commence with a cut and comments on Brush Seed Sower, followed by a remedy for the Bee Moth; then Model Farms, &c., are discussed. I understood the writer to say that the inquiry, In what manner can the State beneficially aid the farmer, lies at the foundation of all our action! O, no. That talk may do for Frenchmen, but not for Yankees. What are we doing *ourselves*, is the question for us to build upon and to answer. Native Gooseberry recommended; those in this section, though better than none, are not much esteemed. What shall I do? I'll tell you what, Mr. "C. W. A." Go to the city and work at a trade, till Saturday night—pay \$3.25 to the landlady, and 40 cents to the washwoman, and you will soon learn better than to contrast wages *without* board and washing, with wages *with* board, washing and mending, and may pick up a few other facts worth remembering. Proceedings of Concord Farmer's Club, on the memorable 19th of April; A Shower of Mud; Paint for Brick Houses; Gardening; a Column of Replies to Correspondents; Ladies Department; Advertisements and Contents, complete the task for this month of

A READER.

Winchester, May, 1853.

AGRICULTURAL AXIOMS.

In no department is Bacon's celebrated maxim, "Knowledge is power," worth more than in agriculture. Hence, no farmer can be accounted skilful in his profession, who does not avail himself of the information to be derived from the experience of others, and who does not improve his knowledge of husbandry by the perusal of the ablest works which have been written on that subject. It is absurd to imagine, that the communication of knowledge which has promoted the advancement of every other art, should be of no use in agriculture. Endeavor to raise good grain, for it will always sell, even in years of plenty; whereas it is only in dear and scarce seasons that there is demand for grain of an inferior quality. Let your stock of cattle, horses, &c., be of the best bloods, and more remarkable for real utility than for beauty or fashion. No farmer ought to undertake to cultivate more land than he can manage to advantage. It is better to till twenty acres well, than one hundred in a slovenly manner. A man's owning a large farm is no excuse for imperfect tillage. What he cannot improve, he need not undertake to cultivate. A large farm, without skill, capital, and industry, is a plague to its owner. It is like what somebody said of self-righteousness, the more you have of it, the worse you are off.

For the New England Farmer.

BIRDS OF NEW ENGLAND.

THEIR PAST AND PRESENT HISTORY....No. 4.

BY S. P. FOWLER.

It is our intention, in this article and others which may follow, to present to the notice of the *Farmer* and *Horticulturist*, some of the habits of our birds most interesting to them. But in order to present to the reader something of the present history of the feathered tribes, we shall enumerate all the species in their orders to be found in the Union, together with those that are known to have been discovered in Massachusetts.

The first order includes the rapacious and nocturnal birds of prey. These take up their abode in forests and solitary places for the most part, and refuse to receive the protection afforded by man and flee from his presence. They subsist by war and rapine waged upon other birds and small quadrupeds.

The second order are the omnivorous birds, so called because they are not discriminating in their food, feeding upon insects, worms and carrion.

In the third order we find the insectivorous birds, so called because they principally feed on insects, only occasionally feeding upon fruits and berries.

The fourth order embraces the graminivorous birds, so named on account of their habit of feeding principally upon grain, and seeds, insects only constituting a part of their food.

The fifth order is the *Zygodactyli*, derived from two Greek words to join, and a finger, and used by ornithologists to designate those birds whose feet are furnished with two toes before, and two behind, as the Parrots and Woodpeckers. These birds, particularly the Parrots, subsist principally upon nuts and hard seeds, while the Woodpeckers add to their bill of fare caterpillars, worms, the larva of insects, and occasionally fruits.

Order sixth are the slender billed birds, or the *Ten-u-i-rosters*, from the latin *tenuis* and *rostrum*, and applied to birds with a long and slender bill, as the Humming Bird. Nearly all this order feed upon insects.

The seventh order contains only the Kingfisher, an odd, grotesque looking fellow, who gets an honest living by fishing. His note is as singular as his appearance, and resembles the springing of a watchman's rattle. It is the only species as yet discovered in North America. It is known to ornithologists as the Belted Kingfisher.

In the eighth order we find the Swallow tribe. These birds feed exclusively on insects.

The ninth order contains the Pigeon tribe. The food of these birds consists of grain and seeds, rarely of insects.

In the tenth order are included the gallinaceous birds. These subsist on grain and seeds, not unfrequently adding buds of trees, berries, and larger insects, to their fare.

The large number of water birds may be classed as Wading birds, and Lobe-footed and Web-footed birds. They feed upon fish, reptiles, marine insects, seeds, vegetables and shell-fish. Their voice is unmusical, they are shy and retiring in their habits, and avoid the haunts of men. It is in New England that we find the greatest number of birds, both useful and interesting to the farmer and horticulturist. Massachusetts, particularly in the

warm season of the year, abounds with beautiful birds. The fondness of many birds for our glorious old Commonwealth, doubtless arises from its variegated surface, diversified as it is by hills and dales, streams of water, beautiful ponds and lakes, saline marshes and grassy meadows, open bays and sandy shores, its forests and sylvan groves, extensive orchards, cultivated fields and beautiful gardens. Most birds, except the rapacious ones, avoid deserts and solitudes, and are seldom found in those parts of our country covered with dense forests. It has been remarked by all ornithologists of observation, that birds are soon attracted to the habitations of men, and when a clearing is made in the forest, or a fur post is opened on the shores of the rivers, or the lakes in the West, the birds (excepting the carnivorous ones) always increase about them. This arises from their desire to flee from birds and beasts of prey, always to be found in the woods, and from there being usually a greater supply of food, to be found in the cultivated fields and gardens, and to seek shelter and protection from men. It is a fact which every observing man must have noticed who cultivates the soil, that insects and weeds constantly follow his footsteps. And that the higher the state of his cultivation, the more various his productions, and the larger the number of trees, shrubs or plants he has under culture, the greater in numbers and varieties will these pests be found to exist.

In view of these facts, let us look around for means to assist us in extirpating or keeping in check our noxious insects. And where can we find better allies to help us in performing this great work than insectivorous birds? And what cultivator, when he considers all the benefits, and the pleasures to be derived from the presence of these beautiful creatures, would wish to deprive them of the occasional gratification of eating a few of our fruits that we can so well spare. The shooting of our small birds by thoughtless boys, we have for many years considered a great evil. We always admired the limitation given to bird shooters by our old and respected friend, many years since principal of the Bradford Academy in the County of Essex. When requested by his scholars to give them permission to go a gunning "Election Day", he always cheerfully granted their request, but with this wise and safe proviso, to-wit:—They might go and shoot all the *Eagles* they could find, but if they killed any other kind of birds he would *flog* them. Verily, Master G. should be honored as much for his wisdom and humanity, as he is for his attainments in mathematics. But perhaps some will say, give us the evidence that birds are useful in the destruction of insects, and they shall receive our protection. Well my friends, that is the very thing we intend to do in our next communication.

Danversport, Feb. 1, 1853.

S. P. F.

STIR THE SOIL THOROUGHLY.—Plowing and harrowing and stirring the soil, is the order of the day for the most of this month. This stirring of the soil, old Jethro Tull used to teach us, was the first and the last essential of "good husbandrie." Indeed, he was of opinion that better crops could be raised by very finely pulverizing the soil and putting on no manure, than could be raised by manuring highly and pulverizing the soil but little.

By the improved implements of the present day, we can pulverize very thoroughly at comparatively much less labor and cost than they could in Tull's day. Why not adopt his theory of thorough pulverization and the modern theory of high manuring. Combine them together. At any rate, if you plow at all, plow well and make the soil as mellow as possible.—*Maine Farmer.*

THE BLACK KNOT ON THE PLUM.

BY WM. MERVINE, UTICA.

Many causes have been assigned for the disease in question, none of which, so far as my information extends, are satisfactory. Some have supposed it to be occasioned by diseased sap, or vegetable ulcer; some, that it is the work of the curculio; others, with more plausibility, assert that it is the result of poison infused by the minute sting of an insect. But none of those entertaining the latter opinion have described the kind of insect, or its characteristics; and it is therefore fair to assume that their belief rests upon conjecture alone. The latter opinion, however, with the exception of the minuteness of the sting, is correct. It will be permitted me to say, that I believe myself to be first in determining the fact, and in ascertaining, certainly, the habits and character of the insect. I will, therefore, proceed as briefly as may be, and without regard to possible charges of egotism, for asserting in opposition to many scientific men on the subject, what I know beyond a doubt to be the origin of the excrescence, or tumor, and to describe the insect which causes it, its habits, and the best method of guarding against its attacks and increase.

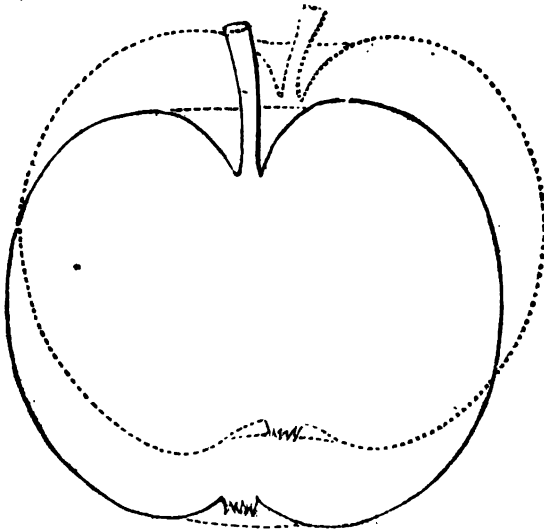
The insect here referred to belongs, I believe, to the Hymenoptera class, and is about an inch in length; color, pale yellow; has four wings, and hind legs resembling those of the grasshopper, which seem designed for similar use; and, although furnished with wings, it uses them only, so far as I have discovered, for calling its mates. This it effects by shrill notes through the medium of vibrations, created by a rapid motion of them; and which affords the means of tracing it. The abdomen of the female is much larger than that of the male, in the extremity of which is concealed a sting of about a quarter of an inch in length, with which it pierces any shrub or limb selected as a receptacle for its eggs—often numbering a dozen or more, which are deposited with some acid poison in separate cells, longitudinally. From these eggs the larvae are hatched—changed to the pupæ, or chrysalis state, and emerge during the ensuing June.

The excrescence does not appear until after the escape of the insects, the swelling of which is caused by the circulation of the sap being arrested in its natural course by the poison infused, which flows round the punctured parts, extravasates, and gradually forms the tumor. On dissecting one of these tumors, a grub may be sometimes found, but it does not cause the excrescence. Any one may satisfy himself of the truth of the foregoing remarks by observing the appearance of the insect during the months of August and September, especially the latter, that being the season of coition, when it may be found making its deposits; these, on being completed, are varnished over with a water-proof substance, presenting a

dark, glazed appearance, by which it may be known, and on carefully splitting a stung limb in the direction of the perforations early in June, the insect may be found in the larvæ state.

I have carried on for two years past a war against this insect, and never suffer one to escape when it can be traced; which, together with a judicious application of the knife in cutting off, and out, all the affected parts so soon as they appear and burning them, I manage to preserve and keep

my trees clear of the unsightly tumors. If all those who are interested in the growth and preservation of those trees would adopt the course pursued by me, this destructive insect might, in time, be exterminated, or its effects, at least, very much lessened. Indeed, unless something be done to arrest its progress, many years, in my opinion, will not elapse ere the cultivation of the Plum and Cherry will have to be abandoned.—*Horticulturist.*



MONAMET SWEETING—GOLDEN SWEETING.

We believe the sweet apple may be profitably produced as food for swine and cattle; and there is this advantage over hoed and sowed crops, that when your trees are once well in bearing, little more is to be done, to give you a bountiful return for many years, than to keep the soil light and rich.

For culinary purposes they are scarcely surpassed by any food that comes on the table. They may be cooked in various ways, are cheap, wholesome, and not so perishable but they may be kept in good condition through several months.

MONAMET SWEETING.—(*Dotted Outline.*)—Large medial; flattish; yellow ground, mostly bright, unbroken red, russet around the stem and on the base; stem medial, deep cavity; calyx large, in narrow basin; flesh whitish, tender, rich, and very sweet. 20th Aug. to 10th Sept. Origin, Plymouth, Mass.

GOLDEN SWEET—ORANGE SWEET.—Large medial; round; pale yellow; stem an inch, rather slender, in a narrow, deep cavity; calyx closed, in medial cavity; flesh tender, of very sweet, rich and excellent flavor. Latter part of Aug. and Sept. A good grower and great bearer. Origin, Conn. There

has long been known in New England another Orange Sweet, larger, roundish conical, yellow, ripens same time; excellent, but poor bearer.

EXTRACTS AND REPLIES.

From D. H., 2d, *Hollis, Me.*—"Thanks to your correspondents from Newton Centre, for information upon hedges, and from Pelham for the same, on hedges and forest trees. These remarks have suggested another species of forest trees which I think would do well for hedges; it is what we commonly call pitch pine. It is one of the most hardy trees, grows well in barren soils, needs no protection or cultivation, other than planting or setting, and does not sprout. I think it may prove one of the most valuable trees for hedges.

Can you, or some of your correspondents, tell me what will kill lice on house roses; several remedies have been recommended in your paper, but they fail."

We know of nothing better to destroy the insect you speak of than *whale oil* soap; syringe the plants freely with it, or place it in a broad pan and bend the branches of the bush over into it.

MISSISSIPPI FARMERS.—The following extracts of a letter from a friend and correspondent, at Edwards, Miss., will give some idea of the difference in magnitude of their operations, and ours in New England, as well as in the kind of crop cultivated. The letter is dated the 13th of April. The writer says, I am now doing what is very unusual on this place, plow and plant as I go. Generally I am a long way ahead in plowing, but it has been too wet to plow until April, and then it is time to plant cotton. I have to-night 90 acres in corn, and it is up—I intend to put in 50 acres more. I have about 145 acres in cotton, and will put in 80 to 90 more. We usually plant corn about 1st of March; this year, though ready, could not plant until 25th, and then the earth, where plowed, was too wet.

This year I hope to fruit 100 varieties of the pear. I have seen blossoms on over 75. I can produce of this year's growth, about 12 inches, of the "Horse Chestnut." We have had blooms of Hyacinth, Tree Peony, Purple Magnolia, Drummond's Flox, Spirea, Iris, Weigela, quite a number of roses, and other flowers. Strawberries, also, are about ripening.

BEES AND HONEY.—I sometime since received a pomological letter from a friend in Aroostook County, Maine. He closes his letter as follows, viz: "Before I close I must tell you about my honey bees, in order to show you that this is a great honey country. You will recollect when I was at your store in Bangor last winter, 1851-2, I had just returned from Piscataqua County, Me., where I had purchased 28 swarms of bees, 22 in the common box hive, and 6 in my improved hive. I have kept them all on my place [in Amity, Aroostook County,] and have had fifty-one young swarms, and have put them all in my improved hives, and they are now worth ten dollars each, (the cost of the hives being \$2 each only) and I have drawn off *one thousand pounds of very pure honey in boxes, and all without feeding the bees,* which shows that we have a very fertile country, in flowers at least."

This is certainly succeeding admirably. He writes also of very good success in his nursery business.

Respectfully, HENRY LITTLE.

Bangor, April 25, 1853.

APPLES FOR MILCH COWS.

Five minutes ago a gentleman, who deals in facts and figures, as well as fine cattle, informed us that he fed out last winter more than two hundred barrels of sweet apples to his milch cows, and that the increased quantity and richness in quality of the milk paid him better than any other use to which he could have applied them. He states that he is raising trees annually, for the purpose of raising apples for stock.

Another important statement of his, is, that since he has fed apples to his cows, there has not been a case of milk fever among them.

Boy's Department.

FOLLY OR ANGER.

If a provocation has been offered you, before you fly into a passion remember the old proverb, "If thou art vexed, thou wilt have two troubles." A wise man once observed, "If I am angry, I punish myself for the faults of another;" and there is much good sense in the remark. I doubt whether even the most irritable man really enjoys a fit of anger. It is at best a painful passion. In fact, the literal meaning of the word anger, is pain, anguish, grief, &c. An irritable man has been happily compared to "a hedgehog rolled up the wrong way, tormenting himself with his prickles." The sting of a single fit of passion sometimes lasts for years. Soon after Lord Byron commenced writing poetry, he was sharply criticised by the *Edinburgh Review*, which so excited his anger, that he published a bitter satire, in which he held almost all the prominent writers of the day up to ridicule. Many years after, in writing to one of the poets whom he had unjustly abused, he made the following confession respecting this famous satire:—"I can only say that it was written when I was very young and very angry, and has been a thorn in my side ever since, more particularly as almost all the persons animadverted upon became subsequently my friends; which is heaping coals of fire upon an enemy's head, and forgiving me too readily to permit me to forgive myself."

The dreadful results which often ensue from fits of anger, furnish another reason why we should shun it. A man was once at work over a kettle of melted lead, when a few drops of water accidentally fell into it, and caused an explosion which sent the burning metal all over his face and breast. A single angry word, falling into an inflamed heart, will sometimes occasion an explosion even more terrible than this. Thus it is that anger and murder are often so nearly allied. Where there are no angry words, there are seldom any angry blows; but with the passionate man it is a "word and a blow." It is therefore well to avoid associating, as far as possible, with those who are given to sudden fits of passion. Solomon says, "Make no friendship with an angry man; and with a furious man thou shalt not go." Prov. 22: 24.—*Boy's Own Guide.*

STRIKE THE KNOT.—When we were boys, little fellows, our father began to teach us to work, and we were anxious to perform the allotted tasks. We were splitting wood. A rough, obstinate knot, tried all the skill and strength of a weak arm, and we were about to relinquish the task, when father came along. He saw the piece of wood had been chipped down and the knot hacked around, and took the axe, saying, "Always strike the knot." The words have always remained safe in my memory. They are precious words, brethren. Never try to shun a difficulty, but look it right in the face; catch its eye, and you can subdue it as a man can a lion. It will cower before you, and sneak away and hide itself. If you dread difficulties, difficulties will grow upon you till they bury you in obscurity.—*Cal. Ch. Adv.*

Advertising Department.

A limited number of advertisements of an appropriate character will be inserted in the monthly Farmer at the following

RATES.

For one square of 15 lines, one insertion.....\$1.00
For each subsequent insertion.....50

The above rates will be charged for all advertisements, whether longer or shorter.

AGRICULTURAL

WAREHOUSE AND SEED STORE, QUINCY HALL, OVER THE MARKET, BOSTON.

THE Proprietors having recently enlarged their Warehouse, and increased their works at Worcester, would respectfully invite the attention of Planters and Dealers in AGRICULTURAL & HORTICULTURAL IMPLEMENTS, GARDEN and FIELD SEEDS, &c., to their stock, comprising the largest and best assortment to be found in the United States, which are offered at low prices.

OF PLOUGHS—we have the greatest variety of kinds and sizes.

Improved Sod Ploughs, for flat furrows—Improved Scotch Ploughs for lapped furrows—Improved Stubble Ploughs, which are especially adapted to deep tillage, or varying from 6 to 12 inches in depth.

Self-sharpening, Hill Side, Sub-soil, Double Mould, Corn, Cotton and Rice Ploughs.

Cylinder Hay Cutters, Smith's Patent Lever Gate, and others. Patent Corn Shellers, with and without Separators. Seed Sowers, of various sizes and prices. Batchelder's patent Corn Planter, Improved. Fanning Mills of various sizes. Horse Powers, Threshing Machines, thermometer Churns. Robbins' patent Centrifugal Churn, Cylinder Churn, Dash Churn, Corn Planters, together with almost every article wanted on the Plantation, Farm or Garden.

Illustrated Catalogues sent gratis on application, post paid
RUGGLES, NOURSE, MASON & CO.
Boston and Worcester, Mass., Jan. 1, 1853

LANGSTROTH'S

Movable Comb Hive,

(Patented Oct. 5th, 1852.)

EACH comb is built on a movable frame, and in five minutes they may all be taken out, without cutting them or carrying the bees. Weak stocks may be helped to honey and brood from stronger ones; queenless colonies supplied; the worms caught; and new colonies formed in less time than is usually required to have a natural swarm. That the safe and easy control of the combs, makes a complete revolution in bee-keeping, the subscriber prefers to prove rather than assert. At his Apiary, combs, honey and bees will be taken from the hives, the queen exhibited, and new colonies formed. By the close of May his work (350 pages) on the Honey-Bee will be published. It contains many new and highly important discoveries, and gives full directions for managing bees, in the author's hive, or any other. Cost of hives from one to five dollars; farm rights five dollars. For one dollar, postage paid, the book will be sent free by mail. On receipt of eleven dollars, a beautiful hive showing all the combs, (with glass on four sides,) will be sent with book and right, freight paid, to any Railroad station in New England; a right, book and hive for two colonies, with glass on each side, for \$13; a thoroughly made hive for two colonies, glass on the bank only, with book and right, for \$11. Address,

L. L. LANGSTROTH, Greenfield, Mass.
3w*3

May 14, 1853.

Super-Phosphate of Lime,

IN bags and barrels, made by C. B. DEBURG, a warranted pure and genuine article, with full directions for use. For sale by GEO. DAVENPORT, 5 Commercial, corner of Chatham St., Boston, agent for the manufacturer.

Also, for sale, Ground Bone, Bone Dust, Burnt Bone, Guano, and Grass Seeds of reliable quality.
March 26, 1853.

Wanted,

An Ayrshire Bull, (full blood) from 1 to 2 years old. Apply immediately at this office.

May 21, 1853.



Devonshire Stock.



For sale, a pure blood North Devon Bull. Also, two Spring Bull Calves, all as highly as can be found in this country. Inquire at this office, postage paid.
April 23, 1853. 6w*3

Auction Sale of 4000 Acres of Land.

ON TUESDAY, the 12th day of JULY next, the subscriber will offer for sale at public auction, several choice and valuable farms in the vicinity of Lockport, in the county of Niagara, and State of New York; among them some of the best improved and most highly cultivated farms in this region of country. Also,

2000 Acres of Choice Timbered Land,

lying about eight miles east of Lockport, and five miles from the Erie canal and the Rochester, Lockport and Niagara Falls Railroad. The timber is principally Beech, Maple, Bass, Ash, Hickory and Oak. In the midst of this tract has been erected

A First Class Steam Saw Mill,

with a variety of valuable machinery, capable of manufacturing 30,000 feet of lumber every 24 hours, all in fine condition and active operation. The mill and the improvements connected therewith, have been erected within the past two years at a cash cost of over \$30,000. The mill will also be offered for sale.

This tract is surrounded by a highly improved farming country, is watered by various streams which meander through it, and is well situated for subdivision. The soil is of the first quality. These lands have never before been offered for sale. No higher commendation of the property offered is needed, than to say it lies in the midst of the most fertile and flourishing portion of Western N. York. The proximity of the railroad,

The Local Demand for Cord Wood

and other lumber, render the timber upon this tract of very considerable value. This land will be sold in lots of 50 acres and upwards, as purchasers may desire. The quantity, condition, quality and value of the property offered, constitute inducements to purchase, rarely presented to the public, whether capitalists or agriculturists.

The titles are beyond question, and the sales will be absolute.

A liberal credit will be given to those desiring it, for a principal part of the purchase money. The whole quantity of land that will be offered for sale will be over 4000 acres. An examination of these lands is invited before the day of sale. Lists and descriptions will be furnished to those desiring the same.

The sale will commence at 1 o'clock P. M., upon the 2000 acre tract, and will continue until all the lands shall be sold.

Lockport, May 26, 1853.

A. WOLCOTT.
7w*

The subscriber begs leave to refer the public to—Hon. Nathan Dayton, Hon. J. L. Woods, Hon. Hiram Gardner, Lyman A. Spalding, Esq., Lockport; Hon. Levi A. Ward, Rochester; Gen. R. Harmon, Wheatland, Monroe county; L. C. Fitch, Esq., West Bloomfield, Ontario county; A. A. Boyce, Esq., Utica.

Morgan Stock Horse for Sale.



For sale by the subscriber, a Morgan Colt, 4 years old last May, weight 1125 lbs., the best model of his Sire (the Green Mountain Morgan owned by Hale) that can be found in New England; his color and action, his temper, and gait, are like the old horse and he is reputed to be the best rider of the whole race of Morgans.

C. W. BELLOWE.
Pepperell, Mass., March 12, 1853. On Nashua and Worcester Railroad. *tf March 12.

Garden Seeds.

WE respectfully solicit the attention of purchasers of GARDEN SEEDS to our extensive stock, which we offer for sale. We have all the sorts of Vegetable Seeds that have proved worthy of cultivation; also, Grain, Grass and Flower Seeds. All the varieties are raised and selected expressly for our trade, and we do with confidence recommend them to all who desire to procure seeds that will prove true to their names.

Catalogues gratis, on application.

RUGGLES, NOURSE, MASON & CO.,
Jan. 1. Over Quincy Market, Boston.

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Clarke's Excelsior Churn.

MR. EDITOR:—I append a literal copy of recommendations which I am in the possession of,—a fair specimen of what accompanies the introduction of this churn. I am rapidly gaining the favor and confidence of stranger dairymen solely by testing the churn wherever I can get a chance to do so. You will soon believe me *without an affidavit*—just so with others.

Leonardville, June 1, 1853.

MR. GEO. B. CLARKE:—The trial of your Patent Excelsior Churn at my house, is perfectly satisfactory, and has fully answered my expectations, as it has performed what you have promised of it, in your advertisements and circulars.

Yours, ever, H. S. PERKINS.

Cazenovia, N. Y., May 3, 1853.

I cheerfully concur in the above, having been present at the testing of the Excelsior Churn at my son's house, as above stated by him.

STILLMAN PERKINS.

This is to show that I have purchased Clarke's Excelsior Churn, and paid him \$10 for it, he having churned about thirty pounds of butter in it at my house, where its operation has given me entire satisfaction.

Yours, &c., E. S. PERKINS.

Cazenovia, N. Y., May 4, 1853.

Talcro Scythe Stones.

500 Dozen Talcro Burr Scythe Stones for sale, to arrive in a few days from ship GEN. TAYLOR, from Liverpool. Parties wishing to supply themselves for the coming season, should forward their orders to the subscriber as early as possible, to save delay. Boxes contain 6 and 8 dozen each.

T. B. BROWNE, No. 7 Deane St., Boston.

May 21, 1853.

2w

Bound Volumes.

BACK VOLUMES of the NEW ENGLAND FARMER, elegantly bound in Muslin, Gilt and Embossed, are now for sale at this office.

NEW ENGLAND FARMER

Is published on the first of every month, by JOHN RAYNOLDS and JOEL NOURSE, at Quincy Hall, South Market St., Boston

SIMON BROWN, Editor.

FREDERICK HOLBROOK, } Associate
HENRY F. FRENCH, } Editors.

☐ Terms, \$1.00 per annum in advance.

☐ All subscriptions to commence with the volume, Jan. 1. The FARMER, is devoted *exclusively* to Agriculture, Horticulture, and their kindred Arts and Sciences; making a neat volume of 576 octavo pages, embellished with numerous engravings. It may be elegantly bound in muslin, embossed and gilt, at 25 cts. a volume, if left at the office of publication.

☐ Also published at the same office every Saturday, on a large handsome folio sheet, the

NEW ENGLAND FARMER, (WEEKLY,)

An Independent Agricultural Family Newspaper.

The News and Miscellaneous departments under the charge of WILLIAM SIMONDS, will include a full and careful report of the news of the Markets, and the news of the week, such as Domestic, Foreign and Marine Intelligence, Congressional and Legislative proceedings, Temperance and Religious Intelligence, and a general variety of Literary and Miscellaneous matter, adapted to family reading, comprising more useful and valuable reading matter than any other Agricultural Newspaper published in New England. Everything of a hurtful or even doubtful tendency will be carefully excluded from its columns.

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The monthly contains nearly the same matter as the Agricultural department of the weekly.

☐ Postmasters and others, who will forward four new subscribers on the above named terms, for either publication, shall receive a fifth copy gratis for one year.

☐ All orders and letters should be addressed, *post-paid*,

RAYNOLDS & NOURSE,

QUINCY HALL, SOUTH MARKET STREET, BOSTON.

☐ POSTAGE.—The postage on the New England Farmer monthly, is 1½ cents per quarter, or 5 cents per year, to any part of the United States, to be paid in advance at the office where the same is received.

Farm in Westboro', Mass.



For sale or exchange, for Boston property, situated on the old Grafton road, within 1 mile of the Railroad Depot, containing 27 acres of as good land as any other 27 acres laying in one body, in the town; it is elevated about 75 feet above the railroad, and overlooks the town, and is within 7 minutes walk of three churches and the town house, which for healthy location is unsurpassed. The buildings consist of a modern house, built by Boston mechanics in 1851, and is 33 by 23 feet, with a kitchen attached, 16 by 23 feet, two stories high, with a cellar under the whole. Wood-house, 16 by 20 feet; work-shop 16 by 18 feet; carriage and hen house, 16 by 21 feet; poultry yard, 30 by 63 feet, enclosed by slate fence 8 feet high; barn, 60 by 36 feet, with cellar under the same, so divided as to give a vegetable cellar containing about 2000 bushels; cistern and well water is brought into the house, and all the wash of the kitchen and privy is conducted by a drain to the barn cellar; likewise a farm house 24 feet square, 1½ stories high, cellar under the same; there are three good wells of water and one good brick and cement cistern on the premises. There are now on the farm 142 large apple trees, mostly grafted, also 220 young thriving apple trees, mostly Baldwins, from 4 to 6 years from the bud, some of them have borne fruit; likewise 24 peach trees of early choice variety, 10 pear trees, &c. There has been taken from the farm the past year, 30 tons of hay, 375 bushels of corn in the ear, 700 bushels of carrots, beets and 8 turnips, 80 barrels grafted fruit, besides vegetables used in the family. For further information, apply at this office, of Messrs. SIMON BROWN or WILLIAM SIMONDS; at Westboro', of Messrs. FAYER WETHER & GRIGGE.

Feb. 5, 1853.

if

Ayrshire Calf.



For sale, a fine Ayrshire Bull Calf, (warranted pure) about 4 weeks old.

Apply at this office.

May 28.

if

RAYNOLDS & NOURSE, PROPRIETORS.
OFFICE....QUINCY HALL.

SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

CALENDAR FOR JULY.

"Now comes JULY, and with his fervid noon
Unsinews labor. The swink^{*} mower sleeps;
The weary maid rakes feebly; the warm swale
Flutters his load reluctant; the faint steer,
Lashing his sides, draws stulkily along
The slow socumbered wain in midday heat."

A great many of the words we use, as well as a great many of the arts we practice and customs we observe, are borrowed from the Germans. Thus we heard a neighbor say the other day, that he "always had to *stang* the hay out of a certain meadow." The word being new to us, we asked such questions as caused him to repeat his remark two or three times, until we were satisfied that he meant to say he was obliged to *pole* out his hay. On reference to Webster we found the word *stang*, common to several languages, the Saxon, Danish, German and Swedish, and means a *pole*.

To *ride the stang*, is to be carried on a pole on men's shoulders, in derision.

The word is used here, only among the descendants of the old English settlers.

The old Saxon and German words are often beautifully expressive. JULY, they called *henmonath*, which probably expressed the meaning of the German word *hain*, signifying wood or trees, and hence *henmonath* might mean foliage month. They also called it *heymonath*, or *haymonath*; because "therein they usually mowed and made their hay-harvest."

It is to be regretted that so few of our writers give their thoughts and pens to descriptions of the changes and beauties of the seasons, instead of the senseless tales of fiction which are enfeebling the minds of so many of our youth, and exciting them to revel in the voluptuous scenes they describe.

It is their truthfulness to nature—their strong common sense views of the living and breathing world about them, that gives such life and force to the writings of the old English authors. They will exist and instruct, long after mountains of the

modern trash will be consigned to their merited dust.

In his "Montha," Leigh Hunt, with his accustomed minuteness of observation, says "the heat is greatest in this month on account of its previous duration. The reason why it is less so in August is, that the days are then much shorter, and the influence of the sun has been gradually diminishing. There is a sense of heat and quiet all over nature. The birds are silent. The little brooks are dried up. The earth is chapped with parching. The shadows of the trees are particularly grateful, heavy, and still. The cattle stand in the shade, or stand in the water. The active and air-cutting swallows, now beginning to assemble for migration, seek their prey about the shady places, where the insects, though of differently compounded natures, 'fleshless and bloodless,' seem to get for coolness, as they do at other times for warmth." There are, also, strange humming sounds in the air as of innumerable insects, though none can be seen—

"Their murmuring small trampets sounden wide,"

as Spencer says. And in the blazing sun, by the dusty way-side, the locust utters his harsh note with screeching wing.

A thousand other pleasant things press on the thoughts, which we will not utter, lest some declare "they are not practical, they do not teach the art of rearing stock, or of cultivating well." Here, then, we are at issue—for it is our firm belief that the farmer who closest observes the operations of nature, such as the birds and animals and insects she periodically brings; notes their habits, the food they require and their modes of propagation, will, all other things being equal, be *the best and thriftiest farmer, the best citizen, and the better prepared for Heaven when his last crops are harvested here!*

The poet did not take too much license when he said there is "sermons in stones"—they are there, just as much as there is sound doctrine and whole-

* SWINKET.—Over-labored, tired.

some reproof in the sermons which you sleep under on Sunday. If you do not hear "music in the running brooks," it is because your heart is not attuned to nature, but still dwells among the clouds!

How many of these beautiful things, so interesting, impressive, and full of teaching, are passed unnoticed by us, votaries as we are, of this work-a-day world.

But as the busy season of haying approaches, our week-day sermon shall be short, important as it may appear to us.

THE HAY CROP.—This is the leading crop of New England. Its aggregate value, if known, even in Massachusetts, would be a matter of surprise to most of us. But *we are too poor* yet, to have reliable statistics on this, or any other agricultural product, in our State! The value and importance of the crop must be *guessed* at a little longer.

A large proportion of the grass cut, is herds grass or timothy, it being the same grass, but called by these different names. When well cured it is an excellent fodder; the cattle eat it with avidity and thrive well on it, and will so continue through the winter. When grown on new, rich ground, it is coarse and wiry, and inferior to clover or red top. Herds grass may be cured or hayed in one day as well as two if cut early in the morning and closely tended until 3 o'clock, of a hot July day.

Clover-hay has fallen into disrepute with many, and we think in consequence of its being so often improperly cured. Cut it in the morning and let it remain in swath until 3 or 4 o'clock in the afternoon, when it should be carefully turned upside down, and left until the following day. About 2 or 3 o'clock on the second day take up the swaths carefully with a fork, and lay them in cocks where they may remain 36 or 48 hours, and should not be opened until there is a fair prospect of obtaining a few hours of good weather to complete the curing process. When this is the case, open the cocks as soon as the dew is off, only partially spreading them. If thought not to be sufficiently dry on examination, they may be carefully turned, and in an hour or two afterwards got in.

When clover is prepared in this manner, the leaves will adhere to the stems, the cattle will eat the whole with a high relish, and we scarcely believe that any fodder is more profitable for them.

Hay is as often made too much as too little. Indeed, we believe it the fault of New England hay-makers that they dry the grass too much. The secret of making good hay, says Low, is to prepare it as quickly as possible, and with as little exposure to the weather, and as little waste of the natural juices, as circumstances will allow. When we are enabled to do this the hay will be sweet, fragrant, and of a greenish color.

HORNS.—This important operation must not be

neglected in order to hurry on the haying. The loss on your growing crops would be greater by such neglect, than to leave a few acres of grass beyond the proper time for cutting. It will be well to remember *that the atmosphere is the great store-house of manures*, and that it will not impart them to a hard, unyielding soil, be it ever so hungry. Hoe, then, you that thirst for richer soils and larger crops. But you need not do it all with your own hands; make the "old mare," or "Jerry," do it with the horse hoe or cultivator.

ROOTS.—It will not be too late to put in any of the turnip crops early in July. Raise roots for your stock, and use the money for other purposes which you have heretofore expended in the purchase of grain. Weed thoroughly and stir the ground often, and with God's blessing you will not fail of a good crop. Purchase one of the Essex County Onion Hoes and your root crops will cost you only about half as much as they will without it—provided you use it often. The cost is \$1.50 cents. Try it, and you will feel encouraged to cultivate more roots.

YOURSELF.—gentle reader—makes an important item of your care. Without firm health there will be little elasticity of body or mind. Retire and rise early—

"Of all the hours of cheerful light,
The morning is the best."

Don't hurry, nor fret, unless the farm implements are left dirty and out of place; fretting is pardonable in such a case, *if it will do any good!*

When fatigued, rest; when hungry, eat moderately; when thirsty, rinse the mouth, and bathe the wrists and forehead before drinking, and as a general rule avoid ice-water. Stimulants, of any sort, as a beverage, are injurious. Eat sparingly of meat—it is too stimulating for hot weather; shun unripe fruits and scolding, of every sort.

If the garden has been well conducted it will now afford an abundant supply of cheap and wholesome food, which will not only nourish the body but gladden the heart.

Observing these simple rules, you ought to be happy and cheerful, and make glad the heart of your wife and children; and lacking these, gladden the heart of some pretty maiden, who likely enough, would be *willing* to become your "gude vrouw."

But enough for a hot day in July—when the thermometer is at 101½ degrees! We shall now seek the fields, wishing you a God-speed in your labors through all this beautiful HAY-MONTH OF JULY!

ROCKINGHAM FAIR.—The first exhibition of the Rockingham Fair, will be held at Exeter, N. H., September 15th. The address will be delivered by Mr. Brown, of the *New England Farmer*. A plowing match will take place, on the day of the Fair.

For the New England Farmer.

BIRDS OF NEW ENGLAND.

THEIR PAST AND PRESENT HISTORY. No. 5.

BY S. P. FOWLER.

OMNIVOROUS BIRDS.

The American Starling or Meadow Lark, is a bird, well known in New England, and often seen in our old fields and meadows. It is a shy bird, with a plaintive, agreeable note, and perfectly harmless in its habits, feeding upon insects, worms, beetles, the seeds of grass and weeds.—There is no bird that can better claim the protection of the farmer, than the meadow lark.

The Baltimore Oriole, or Golden Robin, is a beautiful and interesting bird. With us they are only a summer resident; leaving us in autumn, they pass on through the States, to Mexico, where they remain in flocks through the winter. They arrive with us in the latter part of May, when our fruit trees are in blossom, and, by their beautiful appearance and mellow notes, add much to the gaiety of the season. They are particularly fond of hanging their pensile nests, to the drooping limbs of the white elm, and spend the breeding season in the vicinity of gardens and orchards; and we always associate these brilliant birds, and their whistling trumpet-notes, with a lovely, quiet summer's day, in leafy June, when the very atmosphere is fragrant with flowers. The Golden Robin feeds principally upon insects, during the spring and summer months, and later in the season it subsists on fruits and seeds. Mr. Audubon says they feed on cherries, mulberries and strawberries, but this is not in accordance with our own observation. They sometimes attack the pea vines, for the purpose of obtaining the grub of the pea bug, which is found therein, and not for the love of the pea, as has been erroneously supposed. These birds certainly deserve the protection of farmers and horticulturists.

We are now about to notice one of our most mischievous birds, the Red-winged Blackbird. He has long been known to the farmer as a sad thief, and was regarded by the Indians as a troublesome fellow, long before he was known to us.—And here, with the permission of the reader, we will step aside, and turn back for the purpose of relating the past history of the blackbird, as found in Roger Williams' Key to the Indian Language, published in 1643, and to furnish an account of the method pursued by the Indians, to protect their corn from the depredations of these birds.—Mr. Williams says "of the black-birds, there be millions, which are great devourers of the Indian corn, as soon as it appears out of the ground; unto this sort of birds, especially, may the mystical Fowles, the *Divells* be well remembered [and so it pleaseth the Lord Jesus himself, to observe Matthew 13] which mystical Fowle follow the sowing of the word, and pick it up from loose and careless hearers as these black-birds follow the material seed. Against these birds, the Indians are very carefull, both to set their corne deep enough, that it may have a strong root, not so apt to be pluckt up [not too deep, lest they bury it, and it never comes up:] As also they put up little watch-houses in the middle of their fields, in which they, or their biggest children lodge, and early in the morning prevent the birds," &c. The Red-winged blackbird is a summer resident in

the whole of North America, and is found in the greatest abundance. It is probably one of our most mischievous birds, and many suppose that very little can be said in its favor, to recommend it to the protection of the farmer. But we shall find when we are better acquainted with the habits of the Red-wings, that the benefits derived from them much more than counterbalance the mischief they occasion. Mr. Wilson, the ornithologist, who appears to have noticed with care the habits of the bird, under consideration, as they appeared to him in the Middle States, says, "they arrive in Pennsylvania late in March. Their general food at this season, as well as during the early part of summer consists of grub worms, caterpillars, and various other larva, the silent, but deadly enemies of all vegetation, and whose secret and insidious attacks are more to be dreaded by the husbandman, than the combined forces of the whole feathered tribes together. For these vermin, the Red-winged Blackbirds search with diligence; in the ground, at the roots of plants, in orchards and meadows, as well as among buds, leaves and blossoms, and from their known voracity, the multitudes of these insects which they destroy must be immense. Let me illustrate this, by a short computation.

If we suppose each bird on an average, to devour fifty of these larva in a day [a very moderate allowance] a single pair in four months, the usual time such food is sought after, will consume upwards of twelve thousand. It is believed, that not less than a million pair of these birds are distributed over the whole extent of the United States in summer, whose food being nearly the same, would swell the amount of vermin destroyed, to twelve thousand millions. But the number of young birds may be fairly estimated at double that of their parents; and as these are constantly fed on larva for at least three weeks, making only the same allowance for them as for the old ones, their share would amount to four thousand two hundred millions; making a grand total of sixteen thousand two hundred millions of noxious insects destroyed in the space of four months by this single species! The combined ravages of such a hideous host of vermin would be sufficient to spread famine and desolation over a wide extent of the richest and best cultivated country on earth.

All this, it may be said, is mere supposition.—It is, however, supposition founded on known and acknowledged facts. "I have," continued Mr. Wilson, "never dissected any of these birds in spring, without receiving the most striking and satisfactory proofs of these facts; and though in a matter of this kind, it is impossible to ascertain precisely the amount of the benefits derived by agriculture from this and many other species of our birds, yet in the present case, I cannot resist the belief that the services of this species, in spring, are far more important and beneficial than the value of all that portion of corn which a careful and active farmer permits himself to lose by it. Mr. Audubon, who was perhaps better acquainted with the habits of our birds than any other person, says the Red-winged Blackbird is so well known as being a bird of the most nefarious propensities, that in "the United States one can hardly mention its name, without hearing such an account of its pilferings as might induce the young student in nature to conceive that it had been created for the

purpose of annoying the farmer. That it destroys an astonishing quantity of corn, rice and other kinds of grain, cannot be denied; but that before it commences its ravages, it has proved highly serviceable to the crops, is equally certain. The million of insects which the Red-wings destroy at this early season, are, in my opinion, a full equivalent for the corn which they eat at another period.

Mr. Nuttall, our own New England ornithologist, fully endorses the opinions of Wilson, in regard to the utility of the Red-wings in destroying insects, and adds, Kalm remarked, that after a great destruction made among these, and the Crow Blackbirds, for the legal reward of three pence a dozen, the Northern States, in 1749, experienced a complete loss of the grass and grain crops, which were now devoured by insects. In a former communication upon the value of the Indian corn, we alluded to a tradition among the Indians, that the Red-winged Blackbird first brought the maize or corn into New England from Mexico.—This belief induced them to spare the lives of these birds, although they undoubtedly caused them much trouble in their little corn fields. Now we are not disposed at this late period, and with nothing but the shadowy evidence of an Indian tradition, to attempt to establish the claims of the Red-wing, in introducing that most valuable plant, the Indian corn, and perhaps thereby obtain a silver whistle, from the Massachusetts Horticultural Society, lest a rival from some unexpected quarter should arise, and contest the prize with our bird. And judging from the blackbird's love of Indian corn, and their boldness at all times, and in all places, in appropriating it to their own use, we should suppose the birds themselves believed the tradition, and that they were but honestly taking what in part belonged to them. Finally, in view of all that has been said in favor of the Red-wing, we may justly claim for them exemption from the cruel assaults of idle gunners, truant schoolboys, and from the necessity of witnessing the vain attempts of honest farmers to frighten them with scare crows.

We are now about to notice the most singular bird, we mean so far as its habits are concerned, to be found in the Union. It is the Cow Blackbird, and is but little known, except to ornithologists. Boys, sometimes, in their excursions after birds' egg, when peeping into the hanging nest of the Red-eyed Fly-Catcher, notice one egg, differently marked, and larger than the rest, but are not aware that it belongs to the bird under consideration. Like the European Cuckoo, they never pair like other birds, but males and females flock together, and roam over the country, living in a state of concubinage and vagrancy, like a band of Gipsies. Their young are never cared for by their parents, but are bred as foundlings, they being the only bird found in this country that do not build a nest, and feed their young. As we have before remarked, the Cow-birds are banded together in small parties, both male and female, during the summer months, and in the breeding season, and, when the female is prompted by nature to lay her egg, she leaves her companions in the flock, and searches for the nest of some small bird, in which to make her deposits. If she chances to find the neat basket nest of the Red-eyed Fly-catcher, and the owner of it not at home, she sly-

ly and in great haste, drops in the nest her solitary egg, and quickly leaves the premises, and again joins the flock, usually uttering some notes expressive of her success, in thus relieving herself of her care. The honest mother and owner of the nest, upon her return, as we may well suppose, feels indignant at the shameful conduct of the Cow-bird, but if she had eggs of her own, in the nest before the deposit of the strange egg is made, the attachment to home is sufficiently strong to prevent her abandoning her nest. Some birds, who have had their homes visited by the Cow-bird, build a false bottom to their nest, and thus covering the egg of the parasite, prevents its incubation. Upon this additional flooring in the nest, the parent bird commences anew to lay her eggs. But usually the Red-eye, after the egg of the Cow-bird is deposited, commences sitting, and in due time the parasite egg is hatched, always before the eggs of the parent bird. The young of the Red-eyed Fly-catcher, or Vireo, usually does not appear until the 13th day from the time incubation commences, whereas, the young of the Cow-bird usually appears on the twelfth day. Should the Red-eye continue on the nest until all the eggs are hatched, the young Cow-bird being a much larger bird, and receiving the most attention from the duped nurse, grows apace, until he nearly fills the small and crowded nest, fairly covering up, putting out of sight, and at last stifling the young of the legitimate bird, which when dead, are carried from the nest by the foster parent, leaving the black stranger alone in the nest, to enjoy all her affectionate attention.—It frequently happens that the Red-eyed Vireo, upon the hatching of the egg of the Cow-bird, which we have before said takes place before that of the vireo, immediately leaves the nest, to supply the foundling with food, and by so doing leaves her own eggs to perish, for the want of a little more incubation. The unhatched eggs are soon ejected by the parent bird, from the nest, as is supposed, who continues to feed the sooty stranger until he leaves the nest, and for some time after. Some thirty years since, we took an egg of the Cow-bird from the nest of the Red-eyed Vireo, and placed it in the nest of a barn swallow, for the purpose of more conveniently watching its incubation. At the time of the deposit there were three eggs in the nest of the swallow, when she laid one more egg and commenced sitting. In about twelve or thirteen days, I noticed that the parasite's egg was hatched, but the swallow's eggs were not. Soon after the hatching of the Cow-bird, the swallow came off her nest, and neglected her incubation, to supply the young foundling with food. The then remaining unhatched eggs of the swallow, after a few days, were ejected as I then supposed by the parent bird, and were found under the nest. The foundling had now the whole nest to himself, and being constantly fed, by both the male and female swallows, became exceedingly large and fat, completely filling the nest, and still clamorous for food. The swallows continued to feed the young bird for several days after it left the nest, and one day, I believe, upon the top of the barn, where it attracted considerable attention from persons passing by.

The egg of the Cow-bird is oval, and small, we should think, for the size of the bird, and thickly marked with small spots of olive brown, on a white ground, tinged with green. The eggs of the

Red-eyed Fly-catcher are white, with a few small brown spots at the large end. We give these descriptions, with the beautiful basket nest of the Red-eye, containing the eggs of the duped owner of it, and the solitary egg of the vagrant, on a table before us, and we can but notice the great difference between them, both as to size, markings and figure. The favorite nurse selected by the parasite, is the Red-eyed Fly-catcher. But when she is not to be found, she seeks the nest of the White-eyed Fly-Catcher, Maryland Yellow Throat, Indigo Bird, Chipping Sparrow, Song Sparrow, Blue-eyed Yellow Warbler, Blue Grey Fly-catcher, Golden-crowned Thrush, Wilson's Thrush Blue Bird, and some others. The Cow-bird is known by many names, such as the Cow-Tropical, Cow-pen Bird, Cow Black-bird, Cow-pen Bunting, and Cow-pen Finch. The Cow-bird should not be confounded with the American Cuckoo, so called from its notes, resembling the words cow, cow. The cuckoo builds a rude nest of its own and lays four or five greenish blue eggs, which it hatches, and rears its young with great care.—The singular habits of the Cow-bird have for many years attracted the notice of ornithologists. Mr. Wilson, when speaking of the bird, remarks, "what reason nature may have for this extraordinary deviation from her general practice is, I confess, altogether beyond comprehension. There is nothing singular to be observed in the anatomical structure of the bird, that would seem to prevent or render it incapable of incubation. Many conjectures, indeed, might be formed as to the probable cause, but all of them that have occurred to me, are unsatisfactory and inconsistent. Future and more numerous observations, made with care, may throw more light on this matter; till then, we can only rest satisfied with the reality of the fact." These remarks were made by Mr. Wilson in his Ornithology, more than forty years since, and we are not aware that any more light upon the subject of the strange habits of the Cow-bird, has been elicited.

Modern naturalists have recognized among some animals, certain aberrant and mutilated forms, and establish what they term the theory of degradation. And for an example they give us the misplacement of parts such as are now exhibited in the fish, known as the flounders, turbot and halibut. These are supposed to have once moved about upright, like other fishes, but from some cause or other, a long time ago, they were thrown over, and made to swim upon their sides, their squinting eyes stuck upon the top of their heads, and their mouths twisted awry. The Scriptures teach us also, that man himself is in a state of moral degradation, and his affections misplaced.—But we are precluded from supposing that the Cow-bird has, at any period, suffered from degradation or misplacement of its parts, thereby rendering it incapable of incubation; from the fact, that upon dissecting it, no disarrangement has as yet been found. We think it is evident, that the Cow-bird's unnatural habits are such as were given it, by the Author of its being, and are not the result of degradation, or mutilated forms, or a vice of habit. This to my mind is very evident, when we consider the singular fact, that when its solitary egg is deposited, with those of the duped nurse, in the same nest, the parasite's egg invariably hatches from twenty-four to forty-eight

hours before those of the foster parent. Here we find a special provision made in favor of the Cow-bird, on which depends the continuation of the species. By consulting the early writers on our ornithology, we learn that its vagrant habits have not changed during a period of more than one hundred years.

We will close this article by observing that the Cow-birds are thought by ornithologists to be related to the Red-winged Blackbirds, certainly as near as cousins, with whom they are often seen associated, but are much less inclined to injure the crops of the farmer, and feed more upon insects than their namesakes, the Red-wings. S. P. F.
Danversport, March 1, 1853.

[TO BE CONTINUED.]

RIDGING—DRAINING.

"Stagnant water," says Loudon, "may be considered to be injurious to all the useful classes of plants, by obstructing perspiration and introsusception, and thus diseasing their roots and submerged parts. Where the surface soil is properly constituted, and rests on a subsoil moderately porous, both will hold water by capillary attraction, and what is not so retained, will sink into the interior strata, by its gravity; but where the subsoil is retentive, it will resist, or not admit, with sufficient rapidity, the percolation of water to the strata below, and which, accumulating in the surface soil, till its proportion becomes excessive in a component part, not only carries off the extractive matter (the food of plants,) but diseases the plants themselves. Hence the origin of surface draining, that is, laying lands in ridges or beds, or intersecting it with small open gutters."

The reader will perceive at once from the foregoing, that the propriety or impropriety of adopting this method of amelioration, will depend upon a variety of circumstances, which may vary, and indeed *do* vary, in every district, and on almost every farm. General rules cannot, of course, be expected; as a course of procedure which might be perfectly beneficial on an undulating and warm surface, in one locality, would be highly prejudicial in another. Where the soil is of a cold or humid character, or where the surface is of a more porous or friable texture, but reposes on a substratum of a compact and tenacious formation, the adoption of this system of drainage cannot be otherwise than beneficial. But in all cases where the subsoil is open and porous, as in the case of gravelly substrata, and where, consequently, the superabundant moisture or water encounters few or no obstacles in its descent, but is permitted freely to percolate and pass off, throwing the surface into ridges, as is the proper course under an opposite modification of physical circumstances, is by no means advisable, as it is calculated to produce far greater harm than good. As to ridges, when necessary, the following rules may be observed:—

1. Ridges should be laid with the slope of the

field, that the waters may pass off freely; and if hollows or hills intervene, cross drains should be out, after the field is ridged, from the low places, to carry off the water, in the direction to which the surface inclines.

2. The breadth of the ridge must depend upon circumstances, and may vary from two to thirty feet. The flatter the surface, and the more tenacious the soil, the narrower should the ridges be laid. The manner of forming them of different breadth, and of different inclination of surface, will be found amply described in the course of our previous volumes. It is well to remark to those who admire and imitate British husbandry, that ridging is not so essential here as in Great Britain—from the circumstance of our climate being warm and less humid.

For the New England Farmer.

STRAWBERRIES.

MR. FARMER:—Perhaps some of your readers would like to know how strawberries are produced in such abundance in this region. Having taken a pedestrian trip among the gardens of Ann Arundell Co. one day last week, I will give you the result of my observations, touching this matter.

All the land, which I saw devoted to strawberries, was of lightish sandy soil. It is prepared, as it would be for corn, by plowing and manuring freely, with such manure as is brought from the city. The price of manure, in Baltimore, is 62½ cts. a cart load, or about \$1.50 per cord.

The land is prepared and the roots are set in April. They are planted in rows, about five feet apart. The plants, in the rows, 18 inches. The plow and cultivator are run between the rows, disturbing the ground two feet in width, leaving three feet to be occupied by the vines. During the first season, no fruit is expected, but much pains is taken to keep the ground clean of grass and weeds. The second year, they look for fruit, and as long thereafter as the cultivator chooses to keep the ground clean, which I believe, seldom exceeds three or four seasons.

The kinds cultivated are the "Alpine," "Hovey's Seedling," "Pine Apple," and what is here called the "Heart Strawberry." Hovey's seedling is not liked, by the cultivator. The berry is large, but in number, few.

The picking is mostly done by colored hands, free and slave, who, in the season of fruit, make business of picking.

The regular price, for-picking, is one cent and a half a quart. In the best of the season, the most expert hands often pick 200 quarts a day. It is not uncommon to see fifty hands picking in one field.

For picking, wooden boxes are used, holding a quart each. These are distributed along the rows, by the superintendent, as they will be needed. The picker fills and leaves them upon the ground, where they are counted and entered to his credit. These boxes are placed with care in a large chest, perforated with holes, for the free admission of air, and in this way, carried to market, without injury. Large quantities are carried from here to Philadelphia and to New York.

Strawberry picking is a gala season, with the negroes. As great numbers of them are assembled, on these occasions, they are wont to gather together, at the close of the day, under the protection of some large tree, if they can find no better shelter,—bring out the fiddle, and spend much of the night in hopping it on the light fantastic toe. Why not as proper, as the occasion of sheepshearing or cornshucking?

As in other departments of horticulture, the gardeners go into the strawberry business, on a pretty large scale. A gentleman, by the name of Brian, has one hundred and fifty acres in strawberries. He picked, I am informed, 200,000 quarts last year, and cleared, on that crop alone, \$5000. He produced peaches and garden vegetables in like proportion.

So abundant are these berries in Baltimore markets, that they are sold very low. They begin at 25 cts. per quart, but soon get down to six cts.: and the latter part of the season, may be had in any quantity for four cts.

Why may not these berries be produced, in abundance, in New England? I believe the climate and soil are both as well adapted to their growth. They grow spontaneously in most parts of every State in New England. Not so here. They are seldom seen in the fields. There needs but attention, on the part of gardeners, and good strawberries may be had in your markets, for less than 25 cts. for a quart basket holding but a pint.

R. B. H.

Baltimore, June 8, 1853.

THE TURNIP CROP.

The time was when little was known of the turnip family except from two of its members, the common flat and the long and many rooted French variety. These were raised only for the table. The French was sowed in May and transplanted like the cabbage, and from one-half to two bushels was a large crop for one family. For the common turnips nothing would answer but a piece of new land well burnt over and proceeded with by the law,

"Twenty-fifth of July,
Sow your turnips, wet or dry."

Some fifteen years since the Ruta Baga, was introduced, and a real "Multicaulis" fever followed. The doctrine became prevalent, that if a man raised a half acre of Ruta Bagas, it would be all sufficient to winter two horses, twenty cows, and a hundred sheep, with the usual complement of pigs and poultry. It was found, as a matter of course, that it failed to do this, and not answering these extravagant expectations, it was cast out as a worthless thing. Like some other friends whom arbitrary decisions have banished, it has been recalled, and found truly valuable, as answering all reasonable expectations. Next to the Ruta Baga came the true long white or cow-horn, raised like the common flat, and a valuable addition to the list. The yellow Aberdeen has been added. This may be raised by broadcast sowing, but is much improved by drilling and hoeing. Recently we have some very valuable turnips for table use and for stock, introduced from abroad, under the names of the long yellow, the Grecian, the Sweet, the Spring, the Cabbage, the Swedish, &c. There are among them two or more distinct varieties, al-

though the same varieties pass under different names. Some of them are yellow, others white. They keep well through the winter and spring and are very valuable in that dry period which precedes the early garden vegetables.

Their culture is similar to the ruta бага, sugar beet and carrot. The ground should be made rich, well and deeply plowed, and made fine.

Much difference of opinion exists as to the time of sowing not only the turnip, but the beet and the carrot. From the first to the tenth of June we should prefer. If sowed early the vegetation of the seed is a little less certain, and always slower. The ground becomes hard, the weeds get the start of the plants, and the labor of tending is much increased. But if the ground is replowed or thoroughly pulverized with a good cultivator in the first part of June, one crop of weeds is destroyed, the seed comes quick and the plants are strong, insects are less troublesome and less destructive, and the labor of weeding very much less.

If you ask farmers why they raise so few roots, one-half at least will tell you it is too much work to weed them. This is a true answer if the method often pursued is adopted. But if the ground is plowed early and manured with some compost or other article in which the seeds of weeds are wanting, and the ground stirred so as to kill all the weeds that may start before June, then sowed in rows eighteen inches or two feet apart, and the plants thinned so that a hoe will pass between them in the rows, the labor will be reduced to less than one-fourth what it will be if the ground is manured with common stable manure and the sowing made before the middle of May, and in such manner that the fingers are the chief instrument of culture. Raised for extensive use, they must be raised as other field crops are. The plow and hoe must do the work which in garden culture is performed by the spade and the fingers. In this way, and in this only, can the farmer afford to cultivate roots for stock.—*Culturist and Gazette.*

REMARKS.—Good crops of turnips may be had by sowing any time before the 10th of July, or even later. But if convenient, we should prefer sowing in June.

For the New England Farmer.

THE POTATO CROP.

MR. EDITOR:—Sir, as the subject of the rot has been brought up this spring through the columns of your paper, I should like to have the farmers try my method to prevent the disease, which is, in the first place you are not to plant potatoes where corn will not do well, and then spread your manure and plow it in; let your furrows run north and south three feet apart, your hills two and a half; plant first a row of corn, next a row of potatoes, and so on through the field, the last row corn. Put on a table spoonful of salt to each hill. When your potatoes are up, put on a pint of unleached ashes, or slaked lime round the vines; let the tops of stalks stand till digging time, not put your potatoes in the cellar till the first of October; have your cellar well ventilated, and put one bushel of pulverized charcoal to every fifty bushels potatoes.

Those that have taken the *New England Farmer* for two years past will recollect seeing this rem-

edy published. I have tried it the past year, and the result was, not a single diseased potato.
Georgetown, Mass., 1853. I. N. M.

REMARKS.—The above was mislaid; but some of its advice may be adopted now if any one desires so to do. Very few potatoes rotted last year where no precautions were taken. When a "sovereign balm" is found to cure the sycamores, we shall have hope that a remedy for the potato rot is discovered. We predict a fair crop of sound potatoes from the present planting. Planting alternate rows of corn with the potato has been often tried without valuable results.

From the New England Farmer.

TO PRESERVE MANURES.

It is very easy to preserve the most valuable of all fertilizers, that brown, fetid liquor, that is so often allowed to run away, or the gases that are allowed to escape from the manure heap, by a little judicious care, at a very trifling expense. To accomplish this, take a quantity of the sulphate of iron, (green copperas,) which is easily dissolved in water, at a temperature of 100 degrees. When completely dissolved, mix it with water of the dung heap, adding a fresh quantity of the sulphate of iron each time; when the water from the dung heap is alkalized, after having run through it, repeated throwing over the dung heap, it is easily ascertained by dipping a piece of litmus paper into it, when the color turns brown or red, and the water thus charged with the sulphate of iron in a state of solution penetrates into every pore of the heap, and converts the carbonate of ammonia, which is very volatile, into the sulphate of ammonia. By adopting this system or process, the richness and duration of the dung are considerably increased, at a very trifling expense. The manure thus saturated with the sulphate of iron can be exposed to the sun and air without losing its most essential properties, because the sulphate of ammonia does not volatilize itself, like the carbonate of ammonia. M. A. PERRY.

Watertown, June, 1853.

For the New England Farmer.

FRONT FENCES—SETTING POSTS.

MR. EDITOR:—I wish to make a few inquiries of you or your correspondents. I wish to build a door yard fence. It should be plain, not expensive, but one that will *look well* when completed. Posts set in the common way would be sadly thrown with the frost. In view of this, in what manner or style should the fence be built? How can posts be set so as to prevent them from being heaved with the frost? Permit me also to inquire the best way to exterminate alder bushes, that grow so luxuriantly on the margin of brooks. By answering these inquiries in the *Farmer*, if proper, you will greatly oblige myself, and I doubt not many others of your readers.

Yours, &c.,

S. G. B.

REMARKS.—Many of our readers have the knowledge which "S. G. B." wants; will some one oblige us and him by communicating it soon!

WATERING THE GARDEN.

THE WATERING POT.

The season has arrived when the garden usually requires a little more moisture than the clouds send, in order to secure a good crop of the garden vegetables. We offer therefore a few suggestions and helps to the gardener in the way of watering. Great benefit may be derived from mulching; for it is as well to prevent excessive evaporation as to supply the water.

The first cut is the common WATERING POT. It is an article indispensable in every good garden, and will be found of great service in distributing guano water over the plants.

THE WATER CARRIER.

The second is the WATER CARRIER, and consists merely of a tight barrel or cask, attached to a pair of old wheels, and used for carrying water about the grounds, or bringing water from brooks or springs for washing and other household purposes. When large quantities are wanted, this is far less tiresome than to carry it in buckets. Besides, it makes a great saving of time. No person who has ever made use of one would willingly be deprived of it. Its cost would be saved in one season.

THE GARDEN ENGINE.

This machine is adapted to the wants of a very large garden. The one represented above will hold about forty gallons, and can be easily wheeled around and worked by one person. It will throw water to the height of forty feet, and to the distance of seventy feet horizontally. It may, there-

fore, be found of use in extinguishing fire in buildings.

BUCKWHEAT.

Buckwheat—or Beechwheat, as it should have been called, for it was named from its resemblance to the beech nut—is an excellent crop as far as it goes, and for the uses required. It is easily raised, requiring neither an extra rich soil nor a culture more particular than good management requires for any crop. The late period in the season when it may be sown allows a destruction of weeds at a time when such destruction is commonly fatal to them; so that the culture of this crop is favorable to clean fields.

It may be sown at any time during the month of June; and we have known it to be put in on the fourth of July, in a region where the summers are shorter than ours, and a good crop obtained. It is usual to sow from three pecks to a bushel per acre broadcast and cover with the harrow. It is desirable to roll the ground after sowing. In addition to the common reasons for so doing, the crop grows low, and is liable, without careful management, to become foul with sand or earth, and thus injure the flour made from the grain. The land should be in good tilth, otherwise there is no difficulty in the culture.

The crop is cut with the cradle before frost, and should be raked very carefully in a dry day to avoid the dirt. A good way is to set up the gravels on the butts for drying, and to carry them to the floor and thresh immediately. The crop is liable to heat if stacked or packed closely in a mow. The grain requires thorough cleaning if it is to be eaten by human beings, but when that is attended to, and the grain is well floured, it furnishes cakes for winter use which many people do not know how to dispense with.

Buckwheat is perhaps the very best crop for sod ground to be had. We have known full crops to be obtained on such lands.—*Prairie Farmer.*

For the New England Farmer.

SUMMER AND AUTUMN APPLES.

Planting and grafting winter varieties of the apple has engaged the attention of farmers so extensively of late, that good summer and fall kinds are comparatively scarce in some sections and sell readily at a fair price.

Good baking sweetings are much called for, and every one who has an orchard should have a few trees of the best early and late varieties.

The early bough, the orange sweet, and Haskell sweet, are among the best kind; there are many others that might be mentioned, from which to make a selection; every one can exercise his own judgment in this matter; in general, we are more prone to raise too many kinds than too few. Of the acid and pleasant varieties, the Porter is one of the best for cooking and dessert, and is in use for a long time. The Gravenstein is a fine fruit of foreign origin, and is well adapted to this region. The Leland pippin, or New York spice, is a first-rate kind, worthy of extensive cultivation. Of the earlier kinds the red Astracan, early Williams, and others, might be named; the Williams requires high cultivation, and then produces beautiful and fine-flavored fruit.

O. V. HULL.

Leominster, June, 1853.

GERMAN AGRICULTURE.

Each German has his house, his orchard, his road-side trees, so laden with fruit, that if he did not carefully prop up and tie together, and in many places hold the boughs together with wooden clamps, they would be torn asunder by their own weight. He has his corn plot, his plot of mangold wurtzel, or hay, for potatoes, for hemp, &c. He is his own master, and he, therefore, and every branch of his family, have the strongest motive for constant exertion. You see the effect of this in his industry and his economy.

In Germany nothing is lost. The produce of the trees and the cows is carried to market; much fruit is dried for winter use. You see it lying in the sun to dry. You see strings of them hanging from their chamber windows in the sun. The cows are kept up for the greater part of the year, and every green thing is collected for them. Every little nook, where the grass grows by road-side, and brook, is carefully cut with the sickle, and carried home on the heads of the women and children in baskets, or tied in large cloths. Nothing of any kind that can possibly be made of any use, is lost; weeds, nettles, nay, the very goose grass which covers waste places, is cut and taken for the cows. You see the little children standing in the streets of the villages, in the streams which generally run down them, busy washing these weeds before they are given to the cattle.

They carefully collect the leaves of the marsh grass, carefully cut their potato tops for them, and even if other things fail, gather green leaves from the woodlands. One cannot help thinking, continually of the enormous waste of such things in England—of the vast quantities of grass on banks, by road-sides, in the openings of plantations, in lanes, in church-yards, where grass from year to year springs and dies, but which, if carefully cut, would maintain many thousand cows for the poor.

To pursue still further this subject of German economy. The very cuttings of the vines are dried and preserved for winter fodder. The tops and refuse of hemp serve as bedding for the cows; nay, even the rough stalks of the poppies, after the heads have been gathered for oil, are saved, and all these are converted into manure for the land. When these are not sufficient, the children are sent into the woods to gather moss, and all our readers familiar with Germany will remember to have seen them coming homeward with large bundles of this on their heads. In autumn, the falling leaves are gathered and stacked for the same purpose. The fir cones, which with us lie and rot in the woods, are carefully collected and sold for lighting fires.

In short, the economy and care of the German peasants are an example to all Europe. They have for years, nay ages, been doing that, as it regards agricultural management, to which the British public is but just now beginning to open its eyes. Time, also, is as carefully economised as everything else. They are early risers, as may well be conceived, when the children, many of whom come from a considerable distance, are at school at six in the morning. As they tend their cattle or their swine, the knitting never ceases, and hence the quantities of stockings and other household things which they accumulate, are astonishing.—*Howitt*.

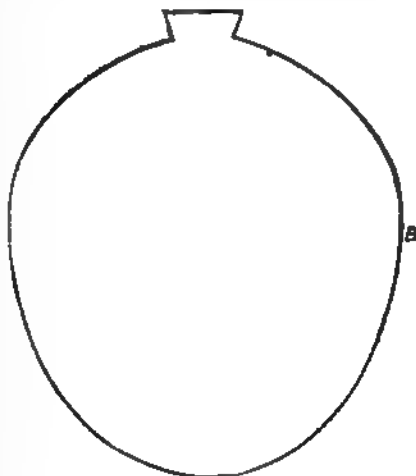
CISTERNS.

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* EXPLANATION OF FIG. 1.

G, is the pipe for conducting the water into the cistern; F, pump pipe, for drawing the filtered water; A, B, C, D, E, layers of charcoal, gravel and sand. The black square dots seen at the bottom of the partition are to admit the passage of the water from one part of the cistern to the other.

Every man who regards the comfort and convenience of his wife and daughters, will see that they are provided with plenty of soft water; and as we do not all have it in our wells, and have no flowing streams or limpid springs at our command, it becomes a question of some importance, how we shall obtain a plentiful supply in the cheapest and most convenient way. In most cases, we believe it may best be done by conducting the water from the roofs of the buildings into a cistern placed under ground, and there preserved for use as it may be required.



In *Allen's American Farm Book* there are the outlines of two cisterns which are represented, with slight alterations, above.

The first, with a flat bottom, shows how the water may be filtered, so as to be fit for cooking purposes, or drinking. The explanation above will show the operation of the filtering materials.

Some years ago we constructed one to contain 5000 gallons, and had it built egg-shape, believing

it to be stronger, less liable to cave in or crack, and more easily cleansed than a flat bottom. The bottom was covered with hydraulic cement and the bricks laid flat upon it, and continued so throughout. Between the bricks and earth of the sides, a space of an inch was puddled with six parts sand to one of cement. For this purpose, clay, pounded carefully in, would probably be better. It was arched, leaving an aperture of the size of a flour barrel; the top, which was a foot below the surface of the ground, and the inside, covered with two or three coats of cement. The walls may be made of wood, stone, or brick, and a great many are made without either. But the safest and cheapest way, if a permanent cistern is desired, is to use stone or brick. Where the water is wanted for cooking, "the cistern should be permanently divided, as represented in fig. 1, into two apartments, one to receive the water, and another for a reservoir to contain such as is ready for use. Alternate layers of gravel, sand, and charcoal, at the bottom of the first, and sand and gravel in the last, are sufficient; the water being allowed to pass through the several layers mentioned, will be rendered perfectly free from all impurities."

In the last year's volume of the *Monthly Farmer*, Mr. DAVID BLAISDELL, of Amestury, was kind enough to send us a table giving the contents of cisterns of different sizes, which we copy in connection with the engravings given above.

A cistern $3\frac{1}{2}$ feet diameter will hold for every	10 inches in	depth.....	59 gallons.
4 feet diameter.....			78 "
4 $\frac{1}{2}$ "			99 "
5 "			123 "
5 $\frac{1}{2}$ "			148 "
6 "			176 "

You will find by this table that a cistern 6 feet deep and 6 in diameter will hold 1260 gallons, and each foot you add in depth will hold 210 gallons. Therefore, one 10 feet deep and 6 in diameter will contain 2100 gallons.

I have one in my house cellar, entirely below the bottom of the cellar, $6\frac{1}{2}$ feet deep and $5\frac{1}{2}$ in diameter, holding about 1000 gallons. It was dug 6 feet 8 inches deep and 7 feet in diameter. The bottom being made smooth, was laid over with brick. The mason then began the side with brick laid in cement, leaving a space all round between the brick and earth about 5 inches. After raising the work about 18 inches, he carefully filled the space between the brick and side of the hole with earth, well and carefully pressed down. If you wet the earth or clay as you fill it in, it will be more compact.

When you get within about two feet of the top, commence gradually to draw in the work towards the centre, leaving, when finished, a space open about two feet across. The next thing is to plaster the inside with cement; also, the top on the outside, commencing where you began to draw in. About two courses of brick are laid round the mouth of the cistern, forming a neck which adds to the strength of the top. Now cover the whole with earth except the neck. The water is conducted to my cistern through a small brick drain laid in cement. I also have a drain near the top, to let off

the surplus water. If a cistern is made out of doors, it must be below the reach of frost. Lead pipe would probably be cheaper than brick, to conduct water to and from the cistern.

I have no doubt but that a cistern made this way of hard brick would last a century. Mine, holding 1000 gallons, cost \$18.00. The larger the size, the less the cost in proportion to the capacity. If the earth is firm and hard, you may lay the brick close against it, thus saving the trouble of filling in and digging so large. I have known them made by cementing directly on the earth, using no brick, and covering the top with timbers or plank. One made with brick will cost more, but I think it best and cheapest, taking into consideration safety and durability.

We give the process below by which any one by figuring a little, may ascertain for himself the contents of any cistern:

To find the contents of any cistern in wine gallons, the diameter and depth being known:—

1. Multiply one-half the diameter by itself.
2. Multiply the above product by 3 1-7; which will give the area of the bottom of the cistern, nearly.
3. Multiply this by the number of feet in depth; this will give the cubic contents in feet.
4. Multiply the last product by 1728, (the number of cubic inches in a foot) which gives the number of cubic inches.
5. Divide the whole result by 231 (the number of cubic inches in the wine gallon) and the result will be the number of gallons in the cistern.

For the New England Farmer.

APPLE TREES.

MR. EDITOR:—Your correspondent M., hailing from Topsfield, can find a satisfactory answer to all his inquiries, about the produce of Baldwin apples, to wit, an average of more than five barrels to a tree, on 40 trees, in each of the years, 1850 and 1852, by calling on Mr. FRANCIS DODGE, on the summit of Ingersol's Hill, in Danvers. I know the facts as stated, because I saw the fruit, each year, when at maturity. All these trees were set on the borders of the field, about 12 feet distant from a high stone wall; and the ground about them was dressed with manure, and kept in a pulverized condition on the surface.

It is now about 25 years since the trees were set by JOHN ANDREWS, Esq., of Salem. P.

May 14, 1853.

For the New England Farmer.

ALMOST A ROOK'S EGG.

MR. EDITOR:—As I am a constant reader of your valuable paper, I have noticed that you are very accommodating in publishing articles that some might refuse, especially concerning fowls and their eggs—and it being rather natural for us to like to have as smart fowls as others, I send you the measure of an egg, laid a few days since by our Shanghai, a last fall chicken, which was eight inches round it the longest way; it seems rather a large story but is nevertheless true.

Lincoln, Vt., May 20, 1853.

A. S. K.

For the New England Farmer.

HAWAIIAN AGRICULTURE.

MAKAWAO, MAUI LAND ISLANDS, }
March 28th, 1853.

GENTLEMEN:—About a year ago I addressed you, requesting the paper for my son, and giving you some items respecting the islands which I thought might interest you, and your readers. I also promised to communicate with you from time to time as I might have anything worth your hearing. I have delayed too long, and now hasten to prepare another communication.

Some months since, I forwarded you a *Polyneesian*, our weekly newspaper printed at Honolulu. In this number you saw probably, a report on "wheat, corn, oats, and other grains," which I had the honor of presenting to the Royal Hawaiian Agricultural Society. If you had the patience to read this long report, you are informed of the history of wheat and grain growing on this group of islands. I am much mistaken if the fact that wheat can be raised at the Sandwich Islands, will not afford you pleasure. You will not despise the day of small things, but will bid us "God speed" in our efforts to produce our own flour and grains of other kinds. Allow me to tell you what we are doing to increase this important means of sustenance since the meeting of our society in June, 1852.

Judge LEE, our worthy President, in his address at the opening of the last meeting in speaking of our wheat at this place, remarked, that "Makawao now has the honor of owning the only threshing machine and flour mill on the islands." This is true, and though some 400 bushels of wheat were raised on my farm and soon after harvested and put into stacks, yet I am sorry that I cannot report more favorably of the results of wheat-growing and flour-manufacturing up to this date. The fact is, I depended upon a broken reed in the shape of a farmer. The threshing machine, a small one of the Albany manufacture, belongs to me; but my farmer who had taken my place for five years, owned the horse power. Being headstrong and self-sufficient, instead of consulting with a machinist in the neighborhood, and having things done properly, he went ahead and broke down ere the team had gone their round a single time.—He then went to work and constructed a wooden power, but after spending some 7 or 8 days in threshing 80 bushels, he gave it up, and sold out his part of the wheat and left my place. Ere he left, however, he undertook to grind some of his wheat in the flour mill. In this he did not succeed, but nearly ruined the mill, a small mill designed for domestic manufacture. The wheat remained in the stack, exposed to all our storms and to the ravages of rats and mice, till the gentleman who purchased the wheat visited San Francisco and purchased another power. We then, about the middle of January, threshed out our wheat, but found that much had been destroyed by the vermin and injured by the rains. The machine did not thresh clean, through some defect in making, so that we had much less wheat than we expected. I immediately commenced planting in drills, and continued to plant till the last of February. I then found that the weevil was devouring my wheat, and I finished it by sowing and harrowing it in as soon as possible. Some sixty bushels I thus committed to the bosom of the earth.—

Mr. Gower, the owner of the other parts of the wheat, has sown some 90 or 100 bushels, and other neighbors have planted and sown some 20 or 30 bushels more. Mr. Gower has sent home for a flouring mill and designs to go into the business of manufacturing flour, corn, meal, &c., &c.

The weather seems to be favorable for wheat-growing, being rainy and cool. But we have our own trials. I had hoped we should escape the ravages of the pelua or cut worm, as I had seen scarcely a dozen in covering several acres of wheat as I did with my own hands. But no sooner had I finished sowing and harrowing in the wheat, than they appeared in great numbers and attacking it very young, so soon, indeed, as it began to peep from the ground; they have destroyed or nearly so, several acres. They take down other things such as squashes, melons, cucumbers, corn, &c.—This is a trial, I assure you, one which it requires much patience to endure, for though I think, on the whole, we have fewer destructive insects at the islands than you have in the United States, for the pelua and weevil are nearly all which we fear—yet we have no means of repairing our loss. There is not a bushel of wheat left on all the Sandwich Islands. So that if half or all my wheat should be eaten down by the pelua, there is no remedy. So of all our seeds. I have about one hundred ears of corn, and a quart of beans, but I fear to plant any of these grains lest they be destroyed, and I lose all. So of garden seeds. Had we a seed store on Maui, I should experiment often. As it is, the thing is dangerous. Still there is hope in regard to Hawaiian agriculture. We have a committee on "worms and other injurious vermin," and though no light, or none of any consequence has yet been cast on the best means of destroying them, I am not without hope that something will yet be effected. I shall expect something important from the chairman of this committee, W. Newcomb, M. D., a scientific member—at our next meeting. I think that a place might be found some five miles from the top of the mountain back of my place, where garden seeds might be raised, and were I young and vigorous, I would try the experiment of a garden for that purpose. I shall keep the idea of such a garden before my mind, and some one may be induced to take hold of the thing. Few of the garden seeds germinate on reaching the islands, hence the scarcity of New England vegetables. We seldom see a beet or a carrot or a turnip, and how much such vegetables would add to our comfort, I need not attempt to tell you.

But my dear friends, the editors of the *New England Farmer*, and ye friends who read the paper, you see on reading my report, that the great obstacle to success in agriculture lies back of all these difficulties. It may be found in the want of laborers. Farming is in low repute, and for aught I see, it is likely to be so. I cannot think of a single youth, if I except my own son, who thinks even of becoming a practical farmer. Some fathers tell of such and such a son—young and tender as yet, becoming a farmer *all in good time*. I have little confidence that any such thing will be realized, and for the obvious reason that all the sons of these fathers, so soon as they approach manhood, are either sent to the United States to acquire an education, or are allowed to go behind the counter, and devoted to the important work of

measuring tape and weighing sugar and nails.—So strong is this feeling among us, at the islands, that I am acquainted with a Christian mother, who declares that she would not consent that a daughter of hers should marry a farmer, because farmers' work is so dirty. And yet, we all see at the islands, that the nation is dying out and out, and the foreign community is suffering, commerce languishing, every thing and every body suffering, because scarcely no one is willing to cultivate the earth. The Hawaiian fields might "laugh with abundance;" but instead of this, they are fruitful in their own disgrace. Where there is one acre filled with vegetation and fruitfulness, there are hundreds lying uncultivated,—filled with thistles and noxious, or useless weeds. Do you ask what are foreigners now doing, since the crippling of commerce has closed so many stores, and then blighted the prospect of gain from this quarter? I will tell you, gentlemen, as I told the people in an address which I prepared for the chiefs and their subjects, persuading them to unite with us in our agricultural society. *Most of them are seeking to suck the breasts of government—dry though they are—while the mother earth shows her bosom full of nourishment and aching to be drawn, they turn from her with scorn.* Without a figure, nearly all, with the exception of a few planters, seek some easier, and as they seem to think, more honorable method of gaining a livelihood than by toiling, and drawing their support from the bosom of the earth. You can see at once that while public sentiment shall set in this direction, there is not much hope that we shall become an agricultural community. The Hawaiians are wonderfully imitative. Naturally indolent, they seem rejoiced to find examples of indolence among foreigners. And at present, the weight of influence is so strong on the side of *trade, barter*, which can be done on horseback, that the voice of the few who are willing to seize the plow and the hoe or spade and cry—"come on; toil and eat the fruits of the earth obtained by the sweat of the brow," I say the voice of such seems well nigh drowned in the clamor of voices which cry, "*Hosanna to trade.*"

Still, I hope for better times, and that I may do something to usher in the day of Hawaiian agriculture. I am laboring both by precept and example, to make the cultivation of the earth—as I believe it to be, second to no business or profession, in genuine honor. With what success I may toil, remains to be seen. If spared, you shall hear. Yours, with esteem, J. S. GREEN.

For the New England Farmer.

PLOWS.

MR. EDITOR:—Dear Sir,—I have lately had on trial two plows of Ruggles, Nourse, Mason & Co.'s manufacture. I tried them on about four acres of green sward. Part of it was free from stones and the other was not. I had always supposed that the double plow would not work well unless the ground was free from stones. But I found it on trial otherwise. The front plow taking from three to four inches of the surface and turning it under, the back plow more easily flings out the stones, by the surface being turned under, and the plow keeps on in its course without breaking the furrow. I also tried the 73 1-2, which does the work admirably, if you wish for a

flat furrow. It cuts a furrow fifteen inches wide and eight deep. But the difference between the two plows is this:—The double plow leaves the ground in an easy state of cultivation. It not only turns the surface underneath, but turns up four or five inches of mould, which cannot be obtained from the flat furrow by harrowing. And by going over it once with a light harrow prepares the ground for the reception of seed.

I think that Mr. Knox, the pattern maker for Ruggles, Nourse, Mason & Co., has made great improvement on the Michigan double plow.

Respectfully yours, PETER FAY.
Southboro', May 25th, 1853.

For the New England Farmer.

BORERS—VARIETY OF.

S. BROWN, Esq.:—A lady correspondent calls for an explanation of the borer, described by me in your March number, stating, that the one which I described is not among her acquaintances—I wish it was not among mine, as its depredations upon my trees have destroyed some of my fairest and best.

There are several worms of similar size, color and configuration, which may appropriately be called by the name of borer—among them may be reckoned, the common wood worm, which is found in such abundance in seasoned wood during its second summer. I have now before me two of this class, half an inch in length. The work of this kind commenced about a year since, upon a cord of wood, and such were their numbers and activity, that the bark now readily cleaves from the wood, they having entirely eaten the sap-wood immediately beneath the bark; they are now about one year old; how long they occupy in the round of their existence I am unable to say.

There is another kind of similar configuration, much larger, often two inches in length, and as large round as a pipe-stem, found in soft decayed wood. There is another kind called the sawyer or oak-pruner. These generally feed upon the sap-wood of oak branches, until, at length they eat into the centre of the limb, and finally cut it off, when the branch and the worm fall to the ground together.

Another kind called the peach tree borer, prevails to a considerable extent among us. The eggs of this insect are laid in the spring, and early summer, upon the peach tree very near the ground. When hatched, the maggot immediately eats its way within the bark, and feeds upon the bark and sap-wood, usually leaving the outer bark unbroken; its depredations are usually at or below the surface of the ground, and its presence may be detected by the flow of gum, mixed with its cuttings. I have never been able to prevent or destroy this insect, except by removing them from the tree. This may be easily done by first removing a few inches of earth around the tree, and then with a sharp pointed knife find the habitation of the worm, which is always in the sap-wood just under the bark. But of all the evils with which the fruit grower has to contend, the apple tree borer, which also attacks the quince, locust, ash, and some others, is the greatest. This is the borer of which I attempted to record the history, just as the borer itself has recorded it upon my apple trees; together with such observations as seemed to me might

be useful to all such as had, like myself, unprofitably made its acquaintance. There are probably more of the family of borers than I have enumerated, but the last two produce the greatest injury, and especially the last one, which is the scourge of all our orchards and has by way of eminence, been called *THE BORER*. Its similarity to the peach tree borer is that the head of each is of the same color, as is also both the color and length of the body; but the dissimilarity is so striking, that a person of common observation would never mistake the one from the other. The head of the peach tree borer is rounder, resembling the head of the grey corn worm, or cut worm, while the head of the apple tree borer is small, protruding in a sharpish point from the body, which is thickest and largest and rather flattened where the head projects forth; the last is also more tapering towards the tail, and is entirely without legs or points upon which it walks, while the peach tree borer is furnished with sixteen pairs of points which serve it as legs.

The insect, which is the highest form of its existence, is still more dissimilar than is the worm. That producing the peach tree borer resembles a wasp, of a steel blue color, while that producing the apple tree borer is a beetle, striped with light brown and white. I have thus given an explanation or a key, to my former communication, which I hope may unlock some truth or lead to some action in arresting the progress of this destructive insect; for a beautiful, a healthy and productive orchard, is next in the scale of man's happiness, to a good, a virtuous, and an intelligent wife.

Yours, RICHARD C. STONE.

Sherburne, May 18, 1853.

A DAY WITH THE "GREAT PLOW."

OLIVER M. WHIPPLE, Esq., of Lowell has long been an advocate for deep plowing,

"And, strange to tell, has practiced what he preached."

On Friday, the 21st May, we had the pleasure of witnessing his operations in the company of several gentlemen, two or three of whom were plow manufacturers. Ten years ago the field had been plowed twelve inches deep, manured, planted, well cultivated one or two seasons, and laid down to grass. For two or three years a heavy crop of grass was cut, which decreased in amount until the last season when about a ton to the acre was obtained. The soil is a sandy loam, and when turned up ten years ago was yellow, with the exception of two or three inches on the surface. On turning it over now, eight inches was found to be a fine, black, and apparently rich soil.

The plow used was one of RUGGLES, NOURSE, MASON & Co.'s Eagle, 77. It cut a furrow twelve inches deep, and occasionally where every thing was favorable, thirteen inches, and eighteen inches wide, laying it over in an angling position, so as to hide all the grass, and leaving a ridge of broken, loose soil, more than ten inches in depth. Here was an opportunity for the roots of plants to ramble, luxuriate and feed, that we never saw surpassed. Each place from which a furrow had

been removed formed a ditch twelve inches deep and eighteen inches wide; so that with such a plow, and a strong and steady team, a great amount of ditching might be accomplished in a day by passing through the furrow-trough a second time with a smaller plow, constructed in such a manner as to throw a considerable portion of the earth to the surface.

Mr. WHIPPLE's opinion is, that we should not wait to accumulate large quantities of manures before "breaking up;" and particularly in regard to old pastures. His practice is to turn the sward under twelve inches, roll, then thoroughly pulverize with plow, cultivator or harrow, until the whole is reduced to a fine tilth. On passing over a field just treated in this manner, we found it somewhat difficult to find the grass, so deep, and compactly had it been placed away.

A strong evidence of the benefit of deep plowing was afforded in the mass of grass roots which were found on the inverted furrow; they had penetrated lower, even, than the twelve inches turned up, and were exceedingly numerous. In such a soil a drought, unless very severe, would scarcely affect the crop.

We believe all were gratified who beheld the exhibition, and will be induced to recommend to others the practice under which Mr. WHIPPLE has been so successful.

LIVE AND DEAD WEIGHT OF CATTLE.

Salemen commonly calculate that the dead weight is one-half of what the animal weighs when alive; but the butcher knows that the produce is greater; it often approaches to three-fifths; and by an extensive stock bailiff of the late Mr. Curwen, it was found that the dead weight amounted to fifty-five per cent. of the live. But the amount differs strangely, as may be seen by the following statement of Mr. Ferguson, of Woodhill, Canada West:

	Live Weight.		Dead Weight.		Tallow.	
	St.	Lbs.	St.	Lbs.	St.	Lbs.
Aberdeenshire ox,	123	11	84	6	16	5
Short horned ox,	133	0	90	1	14	0
Short horned heifer,	120	4	77	9	15	8
Short horned steer,	130	5	67	7	14	12

British Husbandry, vol. 1, p. 392.

The subject of live and dead weight of cattle being one that deeply interests farmers, we again call attention to the subject, in the hope that it may awaken inquiry, as to the question what should be the rule of paying the farmer, for beef he may have grown? It costs him quite as much to grow hide and tallow, as it does mutton or flesh, and we should like to know, why he should not be paid for so doing!—*Ed. Am. Farmer.*

In continuation of this subject, we make the following extracts from Colman's Massachusetts Report:

"In New York, only four quarters are made by the slaughterer, and the hide and tallow are not reckoned in the price: facts which are to be remembered in making comparisons of prices in the different markets."

"The following are some examples of live and

dead weights of New England cattle killed at home, and after being driven from Connecticut river to Brighton, the Boston beef market, a distance of 75 or 80 miles:

Example 1.—One ox live weight in market, 2,393 lbs.; quarters weighed 418 lbs., 415 lbs., 324 lbs., 331 lbs.; hide, 150 lbs.; tallow 173 lbs.—1,811.

Difference, 582 lbs.

Example 2.—Two oxen of A. S., killed at home, weighed as follows:

Live.	Killed.
1,979 lbs.	1,400 lbs.
1,910 lbs.	1,341 lbs.

About 294 lbs. loss on a hundred of the live weight.

Example 3.—An ox weighing on Connecticut river 2,250 lbs., weighed in market, 1,472 lbs. Loss, 778 lbs.

Example 4.—An ox weighing as above, 2,255 lbs., weighed in market 1,487 lbs. Loss, 768 lbs.

Example 5.—A fat bull, of D. S., killed at home, and weighed alive 1,495 lbs.; dead, 1,051. Loss, 544 lbs.—*Stock Register.*

For the New England Farmer.

"EXPERIMENTAL FARMING" AGAIN.

MESSRS. EDITORS:—Your correspondent J., of Bridgewater, in the *N. E. Farmer*, April 30th, criticises the communication "Experimental Farming" with a "home thrust," and makes a pass at my friend, S. F., of Winchester, but the armor of S. F. is so well adjusted in every part, that the effort is as vain as chemical analyses are fallible.

How Mr. J. is going to defend himself in his "opinion," and by his spirit of "controversy," against the results of the experiments of our best practical chemists, I have yet to learn. I advise every farmer to read the communication of S. F., of Winchester, in the *N. E. Farmer*, No. 3, for March, 1853, page 125, caption, "Analyses of Soils." If such men as Professor's Norton, Hitchcock, Liebig, and others, have acknowledged the imperfections of chemical analyses of soils as applicable to practical purposes in agriculture, how can Mr. J. make us believe that we are behind the times, beyond telescopic reach, or does he suppose we are to swallow down the reports of chemists, good or bad, as infallible, for genuine science, at "first sight," without an emollient to lubricate the way? Is it not only very possible but very probable, that the instance of augmented crops, related by Professor Mapes, might have been owing partially, if not wholly, to a more careful cultivation, or a more favorable season, or both combined? I have but little faith in reports of that kind where no responsible names are given. I have repeatedly raised double the quantity of produce on an acre one season I could get on another, soil and treatment being equal; the result of one year's trial of a particular ingredient, as manure, would not satisfy the most of us, as it would not allow time enough for a fair experiment, and if Mr. J. concludes that because Mr. none of us know who, raised large crops after having his soil analyzed, that we can do the same here, he must "jump at conclusions" wonderfully, considering that as much depends upon a favorable season as upon the quantity and quality of the manure applied to the land.

I did suppose that the surface soil was very much dependent upon the subsoil for its fertility, till I have been better taught by my friend J. in his surface reasoning. I believe in many instances we can form a better opinion by examining the subsoil, what the surface soil requires to fertilize it, than a chemist would be likely to do by analyzing the surface soil. Experience has taught us that clay applied to the surface of a quicksand subsoil was a proper application, but no experienced farmer would apply it to an argillaceous foundation.

If my friend J. can make an accurate estimate by "figures" how much more ground will produce by being analyzed, the must be the greatest mathematical juggler of the age.

If farmers are to be governed by the dictation of chemists of doubtful skill, they must be forced into a labyrinth of uncertainties quite as perplexing as the old system of composting and experimenting. I am in favor of chemical analyzation of soils for all who are disposed to go into it, and think that good may come out of it; but by the reports of our most able chemists themselves, of the uncertainty of deciding accurately enough to give positive practical directions, and considering the great variety of surface soils on our farms in New England, I feel but little confidence in the application of the science to my land, thinking to be remunerated for my labor and expense, but I hope my friend J. will engage in the practical analysis of his soil with a zeal becoming "a man of science," and with that success which his enterprise shall deserve, and be able to enlighten us who are behind the times by giving us good practical demonstrations.

SILAS BROWN.

Wilmington, May 10, 1853.

For the New England Farmer.

PLASTER, ASHES, &C.

There seems to be nearly as many opinions in regard to the value of plaster, as there are people; and it is not strange that such is the case,—for while some soils are benefited from its use, others appear to receive no advantage whatever. Until within a few years I have had no faith in applying it to any soil. But for three years past, I must acknowledge that I have been materially benefited by using it on potatoes, planted on light, sandy land. I have very little faith in making use of it on other soils. But my candid opinion is, that it will pay for the farmer to purchase plaster at present prices to put on potatoes, where they are planted on a soil of dry, sandy loam. Last spring, I plowed up a piece of land in a worn-out pasture, which grew nothing but sweet-fern and whortleberry bushes, and planted the same to potatoes, (potatoes too small to sell in market) and used a small handful of plaster in the hill at planting, and the same at hoeing,—and I had the largest yield of potatoes and of the best quality that I have raised for several years.

I have experimented some with ashes, and am of the opinion that unleached ashes have but very little effect when applied to corn hills at hoeing time. I was in the habit several years ago, of carefully saving all my wood ashes to put on my corn, and thought the while I was getting well paid for the operation; but on bringing the matter to the test (putting ashes on some rows, and leaving them off on others, side by side,) I was ful-

ly convinced it did not "pay." Leached ashes spread on broadcast, are of far greater value.— But the best way to treat one's ashes taken from the stove or fire-place, is to empty them into the hen-roost; and with the addition of plenty of sandy loam, mixed, as of course it will be, with the droppings from the hens, a good "home-made guano" is manufactured, which when rightly applied to the corn-field pays the farmer well for his trouble. From a flock of thirty fowls, a half cord of good manure may be easily made; and it will be equal in value to one cord of manure commonly purchased at stables. By throwing ashes into the hen-roost, a two-fold benefit is derived; it not only adds greatly to the manure heap, but acts as an excellent preventive against lice. Nothing is a surer remedy to destroy barn-lice, than ashes and sand. Fowls will soon rid themselves of lice if they have free access to those ingredients.

A. TODD.

Smithfield, R. I., 8th mo., 1853.

ACTION OF THE ATMOSPHERE ON THE ROOTS OF PLANTS.

It is necessary that air should have access to the roots of plants, as much as possible. The admission of air to the roots is necessary to the growth of the plant, and to the germination of the seed. The oxygen of the air, in combination with carbon, forms carbonic acid, which is an agent at once of communicating vital heat and aliment to the plant. This necessity of the admission of air to the seeds and roots of plants, suggests to the farmer two conditions necessary to be observed in cultivation. First, seeds should not be planted too deep. If they are so far below the surface of the earth that the air cannot reach them, there can be no germination. It has been found by experiment that potatoes planted more than three inches below the surface will not grow; but where covered by turfs or light substances, they may germinate. The other condition is that the earth should be loose over the roots. For obtaining this result, if the soil is not naturally loose and open, but clayey and stiff, deep plowing is necessary, and loosening the soil as much as possible. It is for this reason particularly that a clayey soil is inferior to all other. To bring this kind of soil to a proper consistency to admit the air, it is well to temper it by admixture with sand.

In plowing clay lands the furrow should not be entirely inverted, that is, thrown over flat, because that would leave it too compact. But if turned with a plow that will cut a furrow seven inches deep, ten inches wide, and turn it up, leaving it at an angle of forty-five degrees, something like the roof of a house, then the air will be admitted and the whole mass will become lighter. In this mode of plowing, all the grass is covered in, leaving an edge of the soil nearly seven inches thick for the harrow to pulverize into a pleasant and productive tilth.

When once in good condition, clay lands will yield fine crops of grass for many years, with the application only of a little annual top dressing.

The action of decaying vegetable matter, as dead leaves and vegetable mould about the roots of trees, is to give out carbonic acid. If the soil is loose the tree will profit by this, and take up by its roots the carbonic acid evolved. But if there is a stiff bed of clay between the dead matter and the roots, the tree will be prevented from taking up the carbonic acid, and no benefit will be received. From this knowledge the farmer will at once see the advantage of keeping the soil light about the roots of trees, which he wishes to preserve in health and vigor.

A similar operation goes on also in the roots of the grass, corn, and other plants; so that it becomes a matter of importance to keep the soil always light and porous wherever we cultivate.

For the New England Farmer.

STATE PAUPER FARM.

MR. EDITOR:—Being in the vicinity of the State Pauper Farm, in Tewksbury, a few days since, I availed myself of the opportunity to go on to the ground, and take a hasty view of the premises. The institution stands upon a gentle swell of land, about half a mile east of the centre of the town. The building is of wood, three stories high. The centre of the main building is to be four stories. The walls of the western wing are up and covered in; the sills, floor timbers and first floor of the centre and eastern wing are laid, and ready to receive the walls, which are nearly ready to be raised. The building stands upon the northern declivity of the hill, and the main front has a northerly aspect. The ground descends gently from the buildings on three sides; on the other side it continues to ascend some thirty or more rods, but I think does not attain sufficient elevation to furnish a supply of water to the upper stories of the building; nor is there any hill in the vicinity from which water can be readily obtained. It is very desirable that this indispensable article should be furnished by an aqueduct, in unfailing abundance. The convenience of this has been demonstrated at the Asylum at Worcester, and at several other public institutions in the country. So desirable is this that the Coochituate has been carried from Boston to the McLean Asylum, at great expense. Where an aqueduct cannot be laid, the forcing pump must be resorted to, by which, with great labor, a scanty supply may be obtained. The barn is erected, and stands at a suitable distance from the house. I think it is not a model barn. The cellar extends the whole length, but only two-thirds of the width, and in the very part where a cellar is most wanted, there is none at all. The posts I should judge to be 24 or 25 feet high. It will take a very long pitchfork, and very strong arms to reach the high beams. It is heavily timbered, and appears to be well built.

I understood from one of the workmen, who appeared to be an intelligent man, and who showed me the plans, that the original contract required the building to be completed in October, but that

so many alterations had been made that he thought the snow would fly before it was done. The building stands near the centre of a beautiful plat of ground, containing some forty acres, a portion of which—that which ascends to the southward and eastward—is covered with bushes and scrub oaks. Here is a fine location for an orchard, after sufficient labor shall have been expended upon it. The remainder of the plat, after deducting some ten or twelve acres for avenues and a lawn, may be converted into a beautiful garden for the production of vegetables for the establishment. The soil is good and contains but few stones, and with proper cultivation may be rendered productive. At the foot of the hill, and across the road leading from the meeting-house to the railroad junction, the soil is light and sandy, as is most of the land in that section of the town. It bears good rye, and with a good deal of manure of the right sort may yield tolerable crops of corn. There is some pasture land upon the hill to the southeast of the house. From the front of the house there is an extensive prospect to the north and northeast of the range of broken highlands that extend along the course of the Merrimack, constituting the southern side of its basin, from the mouth of the Concord river to the city of Lawrence, and of North Tewksbury, which lies upon this range. This village has much increased within a few years. It contains several fine farms, and a very pretty church. The farm, I think, should the house be filled to its entire capacity, can do but little towards sustaining the inmates. It may yield garden vegetables, potatoes, and milk. The surrounding country finds a ready market at Lowell and Lawrence, which are but a few miles distant. Boston market must be the ultimate resort for flour, grain, pork and beef. If the good people of this state are expecting that the farm will contribute in any important degree to sustain the establishment, they will be sadly disappointed. Its support must obviously be drawn from the State Treasury and not from the soil. There are upon the farm some ten or more old apple trees, and with this exception it is very bare of trees. Every thing is to be done to get the farm into proper shape. Fences are to be built, fields to be laid out, avenues to be constructed, drains to be dug, trees to be set out, and years of patient labor to be performed in order to develop the capabilities of the farm, and produce any satisfactory results. The constant changes to which the force by which all this is to be accomplished will be subject, must increase exceedingly the difficulty of its accomplishment. By the time a raw hand is so trained that he can understand the directions given him, he will be off, and one still more raw be put in his place. Any practical man who has attempted to carry on labor by such hands, will readily comprehend the difficulties attending it. But perseverance overcomes all things, and in the lapse of years will convert this into a beautiful establishment, which will not only illustrate the liberality of the State to the needy and homeless, but also the good taste and judgment of those who have had the management of its concerns.

Yours, &c., J. R.

Concord, May 19.

☞ Agriculture, like the leader of Israel, strikes the rock—the waters flow, and the famished people are satisfied.

CIRCULATION OF SAP—VEGETABLE ECONOMY.

The circulation of sap in plants has much analogy to the circulation of the blood in man. This is especially true in regard to the action of the leaves upon the sap, and its subsequent altered quality. In the ascent of the sap from the root, before it reaches the leaf, it is elevated in the same manner as oil rises in the wick of a lamp. The leaves receive it and throw off an immense amount by evaporation. In this way there is a constant corresponding action between the root which draws the water from the earth, and the leaf by which it is exhaled. But the leaf also takes in water as well as the root. The most important function of the leaf, however, is that which transforms a portion of the water or ascending sap into the peculiar juices of the plant, and sends it back again, circulating it through the vegetable system in a new form; much as the lungs change the venous blood into arterial. This sap, after passing thus through the leaves, parting there with some carbonic acid, and receiving other elements from the air, becomes invested with a new character. In some plants whose ascending sap is poisonous, the descending sap, or matter contained in it, is highly nutritious. And it becomes also elaborated into those special secretions known to us in the form of gum, sugar, starch, gluten, oil, tannin, turpentine, wax, coloring matters, narcotic, astringent, fragrant and acid properties, and the various products of different plants which are nutritive, medicinal, useful in the arts, or destructive to life.

For the New England Farmer.

ORCHARDS.

MR. BROWN:—The Tree Fever, which usually prevails about this season, has been a little more violent this year than ever before. Trees by loads have been removed from the close companionship of the nursery, to scattered situations in remote fields. I sometimes send a thought after those I have slowly reared from the seed, and wonder how they fare in their new localities. Alas! sir, that I hear occasionally of failure and disappointment. I am not surprised by it. I only am when I hear of young trees doing well under circumstances the most unfavorable.

I have done a little, perhaps, to induce others to plant orchards, honestly believing by so doing that they would immediately add value to their acres. But it has happened that the imperfect manner in which the work has been done, has soon discouraged those who had too little faith at best.

Orchards are planted every year without due consideration. It is a matter of some importance to the cultivator that he start right in a work which will absorb time and capital for years, and yield a return exactly in proportion to the judicious application of his labors.

With some exceptions will he do better than to select the comparatively level slope south of his buildings for his orchards. Here the north winds

will be broken. The land lying near the house is easily overlooked and tilled. "A walk in the orchard" will become a pleasure the whole family may often and conveniently enjoy.

I prefer ground that is level for an orchard, to that which is uneven; principally for this reason,—the greater ease of cultivation. By frequent plowing among trees on a side hill, ridges are produced which are a damage to the land. Heavy rains, also, wash the soil down from the top to the valley, where it accumulates to an unprofitable depth. The team-work on hilly ground is great, and fatiguing. It is economy to have as little such as possible.

It will be understood, that I suppose the orchard to be plowed and cultivated every year.—To be sure, I believe in no other system. You must take care of your trees as you would of your corn and potatoes. Clear cultivation with these crops, all allow is necessary. The idea that young trees will ever grow in a tough green sward is an absurdity. Therefore, I would plant the orchard with something—low-boed crops nearest the rows are the best—every year. Some plant a few potatoes around their trees. "It keeps the land loose," they say. This is sheer nonsense, and a bad practice. Such seem afraid the trees will have too good a chance. What they gain in the few potatoes—which in fact is no gain, being so scattered—is doubly lost to the tree.

I will add to these suggestions a paragraph from *Cole's American Fruit Book*. That Mr. Jones knows how to obtain a generous return from his orchard, it is by being generous to it himself.

"Mr. Moses Jones, of Brookline, in this vicinity, a most skilful cultivator, set 112 apple trees, two rods apart, and peach trees between both ways.—The eighth year, he had 228 barrels of apples, and in a few years from setting the trees, \$400 worth of peaches in a single year; and the best part of the story is, that large crops of vegetables were raised upon the same land, nearly paying for the manure and labor. The tenth year from setting, many of the apple trees produced four or five barrels each."

W. D. B.

Concord, Mass., May, 1853.

HAWAIIAN AGRICULTURE.

The reader will find an interesting letter in another column, on the subject of agriculture at the Sandwich Islands. He will find, too, that the same prejudices exist there against honest toil, that are to be found among us here. We thank our correspondent for the interesting letters he furnishes, and for the hearty interest he feels in the noble pursuit of that calling, which, if any can, will elevate the human race and lead it on to the highest enjoyments and dignity it is capable of achieving here. He must not be disheartened. If the seed he casts to the earth fail to spring up and grow, that which he is sowing by his excellent examples *will not fail*, but increase an hundred fold!

As the native population dwindles away, that great resting-place in the highway of nations must be peopled by a more active race, in order to supply the demands which the commerce of the

world will make upon it. Agriculture will flourish, because the demand for its products will be incessant, and then the good seed of our friend will spring up, cover the islands with beautiful fields of corn and grain, trees, vegetables, and all manner of fruits and flowers. May he live to behold a still greater change than this, springing from his noble efforts.

Will he inform us in what manner we can occasionally send him such books and periodicals as we may think would be useful and interesting to him in his extensive field of practice and observation?

A CHAPTER FOR NICE OLD FARMERS.

Can any body tell why country people so universally and pertinaciously persist in living in the rear of the house? Can any body tell why the front door and windows are never opened, save on the 4th of July and at Thanksgiving time? Why Zedekiah, and Timothy, and Jonathan, and the old farmer himself, must go round the house, in order to get into it? why the whole family (oblivious of six empty rooms,) take their "vapor bath," and their meals, simultaneously, in the vicinity of a red hot cooking range, in the dog days? Why the village artist need paint the roof, and spout, and window frames bright crimson, and the doors the color of a mermaid's tresses? Why the detestable sun-flower (which I can never forgive "Tom Moore" for noticing) must always flaunt in the garden? Why the ungraceful prim poplar, fit emblem of a stiff old bachelor, is preferred to the swaying elm, or drooping willow, or majestic horse-chestnut?

I should like to pull down the green paper window-curtains, and hang up some of snowy muslin. I should like to throw wide open the hall door, and let the south wind play through. I should like to go out in the woods, and collect fresh, sweet, wild flowers to arrange in a vase, in place of those defunct dried grasses, and old maid "everlastings." I should like to show Zedekiah how to nail together some bits of board for an embryo lounge; I should like to stuff it with cotton, and cover it with a neat "patch." I should like to cushion the chairs after the same fashion. Then I should like, when the white-haired old farmer came panting up the road at twelve o'clock, with his scythe hanging over his arm, to usher him into that cool, comfortable room; set his bowl of bread and milk before him, and after he had discussed it, coo him (instead of tilting back on the hind legs of a hard chair) to take a ten minutes' nap on my "model" sofa, while I kept my eye on the clouds, to see that no thunder shower played the mischief with his hay.

I should like to place a few common sense, practical books on the table, with some of our fine daily and weekly papers. You may smile; but these inducements, and the comfortable and pleasant air of the apartment would bring the family oftener together after the day's toil; by degrees they would lift the covers of the books, and turn over the newspapers. Constant interchange of thought, feeling and opinion, with discussions of the important and engrossing questions of the day, would of course necessarily follow.

The village tavern-keeper would probably frown upon it; but I will venture to predict for the inmates of the farm-house a growing love for home, and an added air of intelligence and refinement, of which they themselves might possibly be unconscious.—*Fanny Fern—Olive Branch.*

For the New England Farmer.

CRUELTY TO ANIMALS.

I would not enter on my list of friends,
(Though graced with polished manners and fine sense,
Yet wanting sensibility,) the man
Who needlessly sets foot upon a worm.—*Cowper.*

He who knowingly would injure the harmless creatures God has made, can have little feeling for human kind. Injury to creatures may sometimes be done by accident, or through necessity. Such acts "incur no blame." But he, who, for the sake of gratifying his own passions, cruelly treats those animals God has placed here for the benefit and service of man, is justly deserving no claims to humanity. It is not the man who beats with a goad his ox or his horse, that may be called the most cruel or unmerciful; for he who neglects to provide for the comfort and health of his dumb creatures is equally censurable. But in most cases it is pretty true that he who is guilty of the one act, is equally guilty of the other. I have reason to believe, however, that a greater degree of kindness is shown towards dumb animals now, than formerly—that less beating and bruising is resorted to in the training of young horses or oxen; yet there are many who still adhere to former customs, although late discoveries and observations prove that gentle means and mild measures may be more *satisfactorily* used towards subduing the brute creation. The "whip for the horse" will be but frequently used if the hand that plies it is associated with a kind and feeling heart. However great a reformation has been made in the mode of training animals to service, too harsh measures are still used.

The horse, the most noble of all animals used by man, is the most cruelly treated. Even in the present state of civilization, I presume not one horse in five is treated in such a manner as that he lives out the term of his natural life. My opinion is, that if this animal were properly cared for, and kindly treated, he would be in as fit condition to labor, at the age of twenty, as he now is, with present treatment, at twelve. Very few horses at the present day ever arrive at the latter age in good condition, with soundness in body and limb. Hard labor and improper care render him unfit for service at an early age. The constitution of the horse is very similar to the constitution of man, hence, the former is no more fitted to bear excessive labor and unkind treatment, than the latter. It is as injurious to the constitution of the horse to keep him at labor in stormy weather, as it is injurious to man; hence it is as necessary for a teamster (if he would provide for the health and comfort of his team,) to use the same care for them, that he does for himself.

There is one cruel act of which too many are guilty, and about which I cannot forbear speaking. I have reference to the practice of putting off horses which have become unfit for service, in consequence of old age, to cruel and inhuman persons. Although horses thus put off have served their masters faithfully, and doubly paid, perhaps, for

all they have ever received, yet still, for the sake of a few paltry dollars, they are sold to those who will cruelly treat them to the last moments of their existence. It appears to me that the man who will *thus* part with his horse, is as virtually cruel, as he who abuses him after he has him in his possession. Is it not more an act of mercy to take the life outright, of a worn out beast, than to dispose of him to an individual who will kill by degrees?

I have never been the owner of but one horse, and although he is considerably on the down-hill side of life, money would not tempt me to part with him, unless I felt sure he was going into the hands of a merciful man. I have respect for the aged; and verily kindness is actually due those animals whose services are so beneficial to mankind.

Who would see an aged father or mother (whose lives had been spent for their children) turned off with hard usage and unkind treatment, because the infirmities of age had rendered them unfit for service? Of course the kinder treatment is their due, in consideration of what they have been, and what they have done.

Cruelty to animals, is a subject deserving especial attention. Parents ought to make it a point of duty to train their children to be merciful to animals, as well as to human kind. If this were more generally done, certain it is there would not be so many unfeeling and cruel men. The boy who is suffered to grow up with the privilege of inflicting pain upon every animal that comes in his way, is pretty sure to be a cruel and hard master, over whom and whatever he has the control.

"Mercy to him that shows it, is the rule
And righteous limitation of its act,
By which heaven moves in pard'ning guilty man;
And he that shows none, being ripe in years,
And conscious of the outrage he commits,
Shall seek it and not find it in his turn."

A. TODD.

Smithfield, R. I., 2nd Mo., 1853.

For the New England Farmer.

GRAFTING OLD TREES.

MESSERS. EDITORS:—I have had some experience in *grafting*, and propose to give you my method of grafting old trees. I select such limbs as are thrifty and of a proper size, preferring those not exceeding one-half inch in diameter. If the stock is not too large, I splice graft—if one-half inch or more in diameter, I prefer cleft grafting. I set but one scion and scarf off on the opposite side. I use composition without either matting or cloth, and consider it better than either, if it is a good article. With proper care and attention, old trees may be made to yield a handsome profit sooner than young trees from nurseries. I have formed handsome tops on trees with scarcely any signs of life, by thoroughly trimming and scraping, grafting and washing with soap suds.

S. E. HOOKER.

Poultney, Vt., April 5, 1853.

☞ To feed an ox to one thousand two hundred pounds weight, usually takes five years; while the same weight of poultry can be made ready for the table in about three months, and at less than half the cost in food. So says an English poulterer.

For the New England Farmer.

DIVERSITY IN THEORY AND PRACTICE.

MR. EDITOR:—I have often wondered why it is, that in the business of agriculture, there should exist among farmers such a *chaos of theory and practice*. It is difficult to find two farmers who agree in hardly any two of the practical operations of their pursuit. And if a novice in the business should judge from the various and contradictory theories, and statements, and variety of results from experiments, he would come to the conclusion that the science, (or rather the *business*, of agriculture, for science it could not be called,) was as inexplicable as the hidden springs of life and thought.

Modern, intelligent farmers say, "*plow deep*," but much of the wisdom of long experience says, no! unless you want to ruin your land. One farmer says, top dress your highland grass ground, but the *thinking, calculating* farmer says no,—cultivate no more land than can be kept in good heart by plowing in, during tillage, a sufficient quantity of the right kind of food for plants, to support whatever crops may be anticipated, till the proper time arrives for again disturbing the soil. Compost your manure, says one; nonsense, says another, it's time and labor lost. Just as though you can make manure of loam, muck, sand and such trash; there is your manure, and you cannot make any more of it by adding a heap of worthless stuff. One farmer says a good cellar is an indispensable appendage to a barn for economy in the preservation and manufacture of manure! Fudge! says another, barn cellars are more outlets than income. Cut your fodder for your cattle as well as for yourself, says the economic farmer; absurd, says the objector, to suppose that cutting increases the nutritive properties of hay; there is a certain amount of nourishment in a pound of hay, cut or uncut—therefore cutting is labor lost. I might go on and write page after page of such contradictory theories and practices without exhausting their number, but it is needless, they will suggest themselves to every farmer.

Now what I wish to inquire is, whence comes this confusion of ideas! this variance in men's experience! Are there no *settled* principles in agriculture on which we can rely for guidance! Is success in its pursuit so much a matter of *chance*, that we can establish *nothing as certain* in relation to it! Such would be our conclusions certainly, were we to give credit to all the opinions of farmers in relation to their avocation. Mere opinions in relation to the practical part of other sciences, are not permitted to occupy the doubtful position of *theories*, generation after generation, but are either soon exploded, or are reared into the dignity of *facts*, and are then at least, adopted by those whose interests are involved, but its not so. As a general thing with farmers, one man attempts to verify the theory of *deep plowing*, and with no regard to circumstances or conditions, he turns up the subsoil of an already starving, exhausted top soil, manures with his accustomed sparing hand, and then discards *deep plowing* because he gets poorly paid for his *ill devised experiment*. Another man tries the advantage of compost manure, he applies it sparingly to a lean soil, plowed with a

skinning hand to a depth of three or four inches; a drought ensues and he obtains an indifferent crop, and forthwith concludes there is but little virtue in compost manure. Again, another farmer at considerable expense provides a cellar to his barn, but neglects to supply it with loam, muck, or sand to soak up the liquids, and absorb and fix the ammonia of the manure; hauls the fermenting heap out in February or March, dumps it in small heaps upon his field, where the searching winds, scorching suns and drenching rains of spring extract the largest portion of its fertilising properties, and then concludes that barn cellars are more cost than profit. Once again, and the plodder on attempts to verify the profit of chopped fodder for his cattle—but he commences without the requisite knowledge of how much *unchopped* fodder is necessary to satisfy the demands of his stock at certain seasons and temperatures, tries the thing for a few days; finds *some work in it*—which to avoid, he concludes there is no gain, but a loss in time and labor, and straitway gives it up as a new fangled notion of amateur farmers. In this blind and indolent manner do hundreds of farmers lose the advantage of many modern improvements in agriculture. I say blind, because circumstances and conditions are not sufficiently taken cognizance of; and I say indolent, because "*nothing that is truly valuable can be obtained without labor and pains*."

Chemists could never have developed many valuable resources of nature had they not applied the closest scrutiny and most untiring perseverance in watching and testing the nice conditions and adaptation of circumstances which nature requires for her wondrous operations. A like patient energy is demanded at the hands of the farmer—energy of mind to think—and *think profoundly*, as well as of the *will to do*. To render his experience of value, he must analyze facts, compare results, and note, if possible, the conditions necessary to success in every experiment. Nothing would aid the farmer in these pursuits, in my humble judgment, more than the formation of *Social Clubs* or *Agricultural Lyceums*. They would afford an opportunity to every farmer in a town, to make a profitable exchange of his experience for that of others. Nor is the advantage of such social gatherings confined to the acquisition of knowledge to aid merely in material gain. They serve to disseminate an interest in all matters calculated to advance the moral and intellectual well-being of a community. They serve to *awaken* and nourish those kind and generous feelings which render life agreeable and lighten toil of more than half its burdens. County Agricultural Societies are unquestionably doing good service, but their influence is not of that direct character, that is needed for practical advancement amongst the whole body of farmers. They serve to exhibit the results of *successful* effort, rather than point out the errors in *unsuccessful* experiments. Active Town Societies are needed not only for their direct and immediate influence on the agriculture of the town, but for the important aid they would afford to the usefulness of the County Associations, by awakening an increased interest in every department of husbandry; and thereby greatly augmenting the number of competitors for premium productions. There are many Town Societies already, but it is feared they are too generally in a dormant state. It

strikes me that these might be brought into a more active condition, and new ones created, if the State Society should issue circulars to every Agricultural town in the State inviting the attention of its farmers to the subject, and requesting such returns, either to the State or County Society, as would insure life and activity. If these suggestions are of any worth, I hope you, Mr. Editor, or some of your correspondents, who are better qualified than myself, will enlarge upon them and set them forth in order.

T. A. S.

Westboro', May, 1853.

THE TRUE MODE OF CULTIVATION.

MR. EDITOR:—I was much interested in the remarks of my friend T. A., in your last paper. He is an intelligent, public spirited man. He has within a few years removed from the sea-shore, and engaged in the cultivation of the soil, and his own farm is showing the effect of energy directed by intelligence. He wants to see all the farms around him cultivated in the best manner; and carried to their maximum of productiveness. I perceive that he has got hold of the true idea of farming, viz., that it costs no more to carry on a farm in a high state of cultivation, if which it shall yield a large crop of the most profitable kind, than it does to carry on one which shall yield but half a crop, and that of but little value. I am glad he has called the attention of the public to the subject of the proper cultivation of the State farms.

You will recollect that in a conversation I had with you a few days ago, I mentioned the idea of the proper laying out and cultivating the State Pauper farms, which the government is now preparing for the reception of foreign paupers. Were suitable men placed in the office of superintendents of those farms, men who are not only competent to govern the inmates and manage the affairs of the establishment economically, but who have a theoretical and practical knowledge of agriculture,—who have taste and judgment to lay out the farms in the most convenient manner, and assign each part to its most appropriate use, model farms might soon be produced at small extra cost, which would not only be a credit to the State, and would contribute largely to the support of the inmates, but would be patterns to all the surrounding country. The superintendents might consult with the Board of Agriculture, and receive their advice in the management of the farms; indeed it might be proper, that the Board should be consulted in the appointments. They should be required to keep accurate accounts, of debt and credit with the farms, and report their modes of cultivation, with the results, from year to year. In this way they might be made to some extent experimental farms. The Secretary of the Board of Agriculture might direct the cultivation of foreign seeds and grains that might come into his hands, upon these farms. Experiments may be made with imported stock, and in various ways information acquired by experiments upon these farms might be rendered useful to the community.

But every thing of this sort must depend upon the men placed at the head of these institutions. They must be men who understand the fundamental principles of agriculture—men who can distinguish between a false theory and a true one. Men who shall not waste their time and force up-

on impracticable schemes,—but men of intelligence, judgment and experience.

I trust this subject will receive the serious consideration of the "powers that be," and that the suggestions thus made, may be like "seed sown on good ground," which shall bring forth an abundant harvest of good results.

J. R.

Concord, May, 1853.

WEEDS.

Weeds, it should be recollected, are always more exhausting to soil than either roots or grain crops. They are indigenous, consequently gross feeders, and abstract from the soil only those elements of fertility which are essentially and indispensably requisite to sustain the more valuable and cultivated crops. It should ever be a rule with the farmer, to allow no plant to perfect its seed on his premises, that will, in any way, diminish the productiveness of his soil. There are many weeds which, if cut close to the soil, while in inflorescence, inevitably die; and others, if so treated, will not start again till the following year, or if they do, it will be very feebly, and with so little vigor that they will effect but little injury, comparatively speaking, and without any possibility of producing seed. Mullen, thistles, burdocks and many other noxious productions of a similar class, may be eradicated by placing a table spoonful of salt upon the stump of each plant after cutting it. When these weeds are "in force," we have frequently found it profitable to sow salt freely after mowing, as the exuding fluids of the roots dissolve it, and of course take a portion of it into their vessels where it acts as a most efficient destroyer. If a field infested with thistles be mowed when the thistles are in full bloom, and salt, say two bushels to the acre, be sowed upon the stumps, and sheep permitted to graze in the inclosure, it is said the thistles will be at once destroyed. This is perhaps a more economical method of eradication, than removing the plants by the roots, which is tedious, expensive and but seldom effectual.

For the New England Farmer.

ABOUT SHEEP AND STEERS.

Will Mr. GEO. CAMPBELL, of Westminster, Vt., please answer the following questions for the benefit of wool growers?

1st. How much tar do you put in to a gallon of oil?

2d. How much lampblack?

3d. Do you put in any brimstone, sulphur, rosin, or any kind of mineral?

4th. What do you put it on with?

5th. How much will it take to put on one hundred sheep?

6th. What advantage it is to shear sheep the first of April?

Will some one tell how I can make steers' horns turn up when they begin to lop?

YOUNG WOOL GROWER.

Cheshire County, N. H., May, 1853.

VISIT TO THE STATE REFORM SCHOOL.

No better evidence of the progress of men in virtue, and of their gradual approach to the high standard left us by the Saviour, is needed, than the institutions founded for the comfort of the unfortunate and the reformation of the erring. In this Commonwealth these are numerous, generally managed with ability and good judgment, and are accomplishing the objects desired by their benevolent founders.

The *Reform School at Westboro'* is one of the noblest of these charities. In the language of the report of the commissioners, we believe "that of the many and valuable institutions sustained in whole or in part from the public treasury, there is none of more importance, or holds a more intimate connection with the future prosperity and moral integrity of the community, than one which promises to take neglected, wayward, wandering, idle and vicious boys, with perverse minds and corrupted hearts, and cleanse, and purify, and reform them, and thus send them forth, in the erectness of manhood and in the beauty of virtue, educated and prepared to be industrious, useful, and virtuous citizens."

Connected with this school there is a farm consisting of 285 acres of excellent land. This is diversified, having fine hill pastures, rich bottoms, broad plains of light, sandy soil, suitable for corn and roots, and the heavier granite formations, excellent for grass fields, apples and other fruits.

The location of the farm is one of surpassing loveliness. *Chauncey Pond*, a sheet of clear, pure water, about 30 feet in depth, and covering one hundred and seventy-eight acres of land, laves the foot of the pastures and fields, while the ground rises by a gentle acclivity from the shores to a height which overlooks this beautiful gem of a lake, and an extent of country beyond, embracing, in part, the village of Westborough, and, from some portions of the farm, the glittering spires of the churches at Northboro'. The situation is sufficiently retired, and yet of easy and convenient access; the depot at the village of Westboro' being within two and a half miles, and the road level, or of very gradual ascent.

The main buildings are of brick, their architectural style imposing, and the internal arrangement of them commodious, airy and convenient, while some of the accessaries are entirely out of place. The *piggery* being on one side, and an immense reservoir for the collection of the drainage being on another side of the house, the inmates may regale their sense of smell on "an ancient and fish-like" odor, from whatever point of compass the winds may come.

There are now nearly *four hundred boys* at the school, and their time is divided as follows:—for labor, six hours; for school, four hours; for sleep,

eight and one-half hours; and one-half hour for devotional exercises, incidental duties, and recreation. In one apartment, we saw between 60 and 70 boys stitching men's shoes; in another, 70 at work on children's and women's shoes, and in a third, between 80 and 90 sewing on cotton cloth, and on the blue material for jackets and pantaloons, and knitting, or darning. Others were engaged in various duties about the house, and the remainder occupied on the farm.

During their playtime, after dinner, we went among these boys and had free conversation with them. On inquiring what work they chose to be engaged in, the universal reply was, farming, farming; and their countenances brightened, as they replied, each seeming to infer from the inquiry that they might, perhaps, elect, what business they should pursue. But as it is unnatural that children should be subjected to so much restraint, shut up within brick walls and close rooms, it is not strange that they all declared for the green fields, the babbling brooks, and the singing birds. Alas! that so many young hearts should throb in vain for the enjoyments of this beautiful world, open and free to all, whom the seductive influences of error have not rendered unsafe to go at large, amidst its peaceful paths and glowing forms! On these, the stamp of such influences was plain.—Some countenances there were, meek and sad, expressive of contrition and shame; but on most, that bold and hardened cast impressed on those early initiated in the school of vice, was particularly evident. On remarking that they appeared happy, one of them replied, "*ah! some of us can't help thinking; those who don't think, do well enough.*"

The institution was founded by munificent donations and bequests from the Hon. THEODORE LYMAN, of Brookline, in this State, amounting, in all, to the sum of \$72,500. The farm has now cost some twelve or fifteen thousand dollars.

It is not our intention, however, to speak in detail of the founding of the institution, or the management of its inmates; but briefly to notice it in an agricultural point of view.

At the last meeting of the State Board of Agriculture, the following resolution was adopted:—*Resolved*, That Messrs. WILDER, PAGE, PROCTOR, HITCHCOCK, SMITH, DODGE, FRENCH, BROWN, SPRAGUE, and LAWTON, be a committee to confer with the Governor of the Commonwealth, and consider and report, whether any, and if so, what aid may conveniently be afforded by the State to this Board, to facilitate experiments in scientific cultivation of the soil by the use of the lands connected with the State Reform School at Westboro'.

In accordance with these instructions most of the gentlemen named in the resolution, accompanied by Mr. FLINT, Secretary of the Board, and Gen. SUTTON, of the Council, visited the farm and

school on Wednesday the first of June, and devoted the day to such examinations and inquiries as they were able to make. They found the farm as has been already suggested, possessing every natural capability that is desirable; the soil not only varying in quality, but lying so as to render every facility in the various operations of cultivation. Many improvements have been made, such as the removal of old buildings and the erection of a house for the farmer, an excellent barn, 152 by 42 feet, grading about the institution, making roads, digging wells and trenches to lay water pipes, setting fruit trees, &c., &c. A thousand other things, incident to a new place, have also been done, which would scarcely be noticed by an unpractised eye. In common, we believe, with all the committee, we were disappointed in not finding the farm in a higher state of cultivation,—a more perfect system of cropping,—better fences and gates, and that general air of neatness and order which indicates skill and thrift. There were certainly some nuisances which ought never to have been allowed to exist, and which ought to be at once abated; and there is room, we are confident, for the exercise of a degree of skill and energy which has not yet been brought to bear upon it.

Upon a careful examination of the reports, however, we find there has been a gradual increase in the income of the farm, as will be seen by the following statement condensed from the annual reports for the last four years:—

The estimated value of the produce of the farm for the year ending Nov. 30, 1849, was.....	\$3,181 04
Do. do. do. 1850.....	3,975 21
Do. do. do. 1851.....	5,163 15
Do. do. do. 1852.....	6,082 14

We have no disposition to find fault with what has been done, or neglected to be done. Our own experience, both in building and in reclaiming impoverished lands, has been sufficient to convince us that it requires a great expenditure of money, and the lapse of years of energetic application, to change the face of 300 acres and render it attractive to the critical visitor.

The committee were of opinion that the farm affords every facility for making such experiments as are considered important, and with pecuniary profit to the State; and that the farm ought, and under skilful management, may, become the Model Farm of the Commonwealth.

The Trustees, in their annual reports, speak, throughout, in the highest terms of the faithfulness and ability of all the officers in the institution. We infer, therefore, that whatever the Trustees have directed, has been faithfully accomplished. That some important matters have been overlooked, and that, with the means at hand, a more rapid progress might have been made, would be evident to the eye of every skilful farmer.

It is to be hoped that the present Board of Trustees will scrutinize every department, and give it

all the energy of which it is susceptible, and that if unacquainted with any of the operations necessary to be conducted, they will call to their aid the enlightend wisdom of those conversant with the details of every branch of improved husbandry.

We saw enough in this brief visit to contradict the sentiment of the poet, that

"Men's evil manners live in brass, their virtues
We write in water."

The memory of the founder of this noble institution shall be fresh in the hearts of the people, when monuments of brass and marble shall have crumbled to their native dust. It shall dwell in the hearts of the *redeemed from youthful error*, when they stand in the purity of manhood before the world, saving and restoring in their turn, the wayward and the sinning. Let it, then, be our care to watch over its interests, and see that the objects of its founder are fully attained.

LUNAR AND STELLAR INFLUENCE.

We were under the impression that sensible people no longer consulted the "Man in the Almanac," as to when crops were to be planted, hogs killed, and children weaned; and in all seriousness, placed the alleged influence of lunar changes on the animal and vegetable kingdoms, in the same category with those which set Friday down as an unlucky day. In this, if we are to credit the following, we have been, and in quite a large and respectable company, unlearning too fast.

Mrs. Lydia Jane Pierson, in a controversy with a correspondent of the *Farm Journal*, on the subject of lunar influences, after some earnest arguments, invites him to a trial of the following experiments. She says:—"First, we test the influence of the moon in her nodes. If Medicus will lay a board on young growing grass, when the moon is in her *descending* node, he will find, on taking it up after a week or so, that it has smothered the grass under it, and settled close to the earth. A similar board similarly placed, in the time of the moon's *ascension*, will not do so. He will find, on taking it up, after the same interval, that the grass has continued to grow under it, apparently lifting the board with its growth. Next for the phases, he shall select a head of the large double French marigold; he shall have no seed but what grows in this head. He shall plant some near the full of the moon, when the sign is in Gemini or Libra; they will produce large double flowers. He shall plant the same head of seeds near the change of the moon, and the flowers will be single; and if the sign be at Leo or Scorpio, they will not develope even one full row of petals.

"He shall sow, plant, or transplant herb, vine or tree, when the moon is near the full, and the sign of Virgo, and he will have abundance of blossoms, and of long succession, but great paucity of seed or fruit. He shall transplant trees, or cut down weeds, briars or thistles, when the moon is old, and in the sign of the Heart, and if they do not die at once, they will never thrive, but dwindle away and perish.

"When Medicus shall have made these experiments, and witnessed their results, year after year, he will become a convert to the theory of lunar

and stellar influence; and though like hundreds of others he may know nothing of the astrological principles by which nature is governed, he will believe the results which he sees, and cannot controvert. Then I shall expect to hear from him again."

For the New England Farmer.

MOUNT AIRY INSTITUTE.

It appears by a notice in a number of the *Farmer*, that this institution has been discontinued, after having been in operation eight years. It is stated, also, that of the 217 pupils that have attended this agricultural school, four only were sons of farmers.

Had Professor WILKINSON been satisfied with the above announcement, I should not have troubled you with this communication. It is to the inference which he draws from the facts stated, that I wish to call attention,—viz.: that the reason why less than one-fiftieth of the students were sons of farmers, is because the latter think that they are competent to educate their own sons.

From these instructive facts, I draw a different inference; farmers do not patronize these isolated institutions, *because they believe our system of public schools are, or should be, fully competent to educate their sons.*

It is hoped that a brief discussion of this subject may do something towards turning the expectations and reliance of the friends of agricultural education, in this country, from schools of an European type, to those of the New England, or as it is rapidly becoming, the American system.

That isolated agricultural schools succeed in Europe, is with me *prima facie* evidence that they will not succeed here. England has excellent schools for the soldier, for the priest, for the gentleman farmer, &c., but for the "myriads of children that throng the by-places and thoroughfares of her great cities,—which cluster like bees in her vast manufacturing establishments, and overspread her well tilled fields," her government provides none. Benevolent individuals have indeed done something towards supplying this deficiency; but then it must be by means of "Ragged Schools"—as though, in England, charity for the child of neglect, dared not minister to its necessities, without mingling insult with relief. This system of education, or rather want of all system, may, and probably does, accord with the principles of government and the forms of society existing there; and consequently is unsuited to either, as established in the United States.

However brilliant the success of the "model" schools of Europe may appear, they are generally schools that none may enter but those born in certain circumstances, or possessing certain patronage or influence; and it is with the most pleasurable emotions that I turn my thoughts from them to our own New England system of education, with her district and high schools, and colleges,—the birth-right of every child born on our soil, and free to the children of the thousands who annually come to us from other lands. The world has never seen the like. "History," says Prof. G. W. BENEDICT, in a discourse upon the subject, "showed our forefathers the close connection between the characters of the various governments of the world, and that of the institutions of learning existing under them. Our government was to be different from

all others that had been or were then on the earth. To produce and maintain this difference, the institutions for education were to have a corresponding character." . . . "It is from the want of a right understanding of the system thus established, that so many and such diverse schemes are entered upon to effect what can be done in reality only by the system itself. Thus, instead of all devoting their care and their efforts to the advancement and perfection of its several parts, attempts without end have been made at all times and in almost all parts of our country, by individuals, by neighborhoods, and by assemblages of men, agreeing in some peculiar opinions, to establish schools of all grades and forms, quite different from the public ones; and by which out-of-the-way proceeding they have hoped some times to secure personal and local objects, and not unfrequently to accomplish some extraordinary good to their fellow-citizens. These serve to distract the public attention from the schools of the system, and oft-times for a while to do them a serious injury. Yet the result always vindicates the excellence and power of the public system, and its adaptedness to the genius of our government. It moves quietly on its way, and inevitably they are so modified as to conform to its principles and become a part of it, or they fall before it. One after another it devours them, as Aaron's rod of miraculous life swallowed the magic serpents of Egypt."

That the "public system" has thus far devoured the various schools which have been established to teach the science of agriculture, is to me a subject of congratulation; although I would not impeach the motives of the advocates of these "out-of-the-way proceedings." Men are prone to look beyond themselves and their circumstances for the means of doing great things. The mind somehow inclines to overlook the understood and available, and reach forth for something new, something distant, or mysterious, whenever a powerful effort is to be made. Hence, good men, in their desire to advance the cause of education among farmers, seem to overlook our New England system of schools,—a system born of the very necessities of freedom—a system on which the liberties of twenty-three millions of freemen rest—a system in which they have themselves been educated,—and advocate the adoption of the schools of England and of the continent as models for institutions in which American farmers are to be educated!

That the demand for agricultural colleges and schools involves this idea, I am fully satisfied.—They do not harmonize with our free institutions; they favor a *class*—a large one, to be sure, but all the worse for that; as a large influence would be withdrawn from schools common to all.

I fear our system of public schools is in danger, both from the assaults of open enemies, and the indifference of friends. A large portion of the foreigners who annually flock to our shores are directly or indirectly opposed to the entire plan. It is boldly attacked, already, in our large cities; and will be everywhere, as soon as opposition can be made with any prospect of success. Are the descendants of the founders of this system of free schools aware of the position they assume towards it, when they acknowledge, that, as to the education of nine-tenths of the people, it has proved inefficient!

S. F.

Winchester, March, 1853.

LIVING IN CLOVER.

That there is considerable difference between "seed-time and harvest," is sometimes evident to the "meanest capacity." In the spring of promise the demagogue, the humbug and the speculator, incontinently make up their minds that there is "a good time coming." The demagogue assures his supporters that his plan will hasten it, but "the good time" is his own election to a fat office. The humbug lectures, sings, spouts and prints, and the "good time" comes to him in large subscriptions and accumulating pence—the "isms" and "ites" and "tites" and "bites" sell to advantage, and the *seedy* old coat finds itself in "high grass." The speculator acts more directly to the purpose; he forms his theory, keeps it secret, sows his seed and awaits the harvest; but, alas, many a blight defers the fruition of his hopes, and in some cases, when he has determined to "live in clover," and make seed rise without sprouting, he finds, too late, that he has only been going through a "course of sprouts," and that it is the free sellers and not the monopolizers who "live in clover."

During the last summer, when money was plenty, the sun bright, the harvest abundant, hay fragrant, yellow corn waving, and yellow gold on the waves, some half dozen sagacious gentlemen of New York, in connection with a profound director of a Philadelphia bank, formed an association for motives which must have puzzled a Philadelphia lawyer to divine. This association being of that class who know everything, "who never want nobody to tell them nothing, because they know more about their business than anybody else," nevertheless received accurate information that the crop of clover-seed was short in Germany, with chances of short comings in England, and possessed of this information, they *straightways* concluded to make a "ten strike" and go to grass for the rest of their days. Seed was about $8\frac{1}{2}$ to 9 cents per lb., say \$5.50 per bushel, and they began to buy with a degree of shrewdness, promptness and sagacity worthy of a better cause. But to buy is easy—that is, when you have got the money—and if you have got a bank, you have got the money. Caesar said, "Give me money and I will have men; give me men and I will get money." The purchases went on to the extent of 60,000 bushels, and the price gradually rose to 13 cents per pound. The Ohio farmers and the Western growers opened their eyes and opened their granaries, getting a pretty good yield from that seed. But the blasted Dutch did not buy. They are proverbially a slow race, and had not found out how much they wanted "clover-seed." Like the stupid English at Waterloo, who didn't know when they were beaten, they were tremendously in want of clover-seed and didn't know it. So phlegmatic were they, that when the great association had, for the relief of the Dutch, sent out cargoes, these Flemings absolutely allowed it to be re-shipped to London to compete there with direct shipments hence, for the relief of the English, and these English, who, as everybody knows, have some Saxon blood, absolutely sent some of the seed back here.

Here is a pretty kettle of fish! The great association, with the Philadelphia Bank President at the top of it, as Nick Biddle was formerly at the top of the cotton market, is, with the New York *Shipping List* for an organ, stuck at the

close of the season with 50,000 bushels clover-seed at 13 cents, with interest, storage, commissions, and deterioration, to hold over to another season, when the high quotations of the last six months will stimulate an unheard of production. Fresh seed pouring on the market to compete with this old seed, will probably knock it out of the shell, and low prices may be looked for. It is always the case with these violent vacillations that the market goes lower in consequence of a rise, and we should not be surprised if the present stock, say 30,000 bushels here, a good deal of it in Ohio, and 15,000 bushels in Europe, did not bring 13 cents, involving a loss of \$150,000, all because the Dutch don't know what they want.

The New York *Shipping List* had the exclusive information in relation to the course of the seed market, and imparted its useful information generally. If its readers didn't know all about it, "hadn't they oughten" to have known all about it? The seed did not finally go to that "bourne from whence no traveller returns;" it came back, and like modern spirits, to rap—rap the speculators over the knuckles. And the epitaph on Honest John's horse will apply to the dead speculation:

"If he'd of lived, he'd of lived in clover,
But as he died, he died all over."

Philadelphia Paper.

IMPORTANT TO FARMERS.

Every article which can aid the farmer in developing the agricultural treasures of the earth, is of consequence to the world at large. Such an article is asserted to have been found on the Island of St. Vincent, one of the West India Islands, in what is known by the name of "pozzolano." It is said that the island abounds in a kind of earth of the most peculiar properties. It has been analyzed by English chemists, who pronounce it superior to guano as a manure. It is also an excellent cement for use under water. Webster defines "pozzuolana" or "pozzolana," as "volcanic ashes, used in the manufacture of mortar which hardens under water. They are from Pozzuoli, in Italy." Webster makes no mention of its nutritive properties, if such it possess. The only particulars we have in regard to the extent to which it is being applied, are contained in the following extract from the *Mirror*, published on the Island of St. Vincent:

"We are glad to find that the peculiar properties of this description of earth, with which our island abounds, of quality far superior to what may be had from any other island, are now being very generally understood, and that the article, from the increasing demand for it, is likely to become before long one of regular exportation from St. Vincent. Nearly 2000 tons have been exported hence to Bermuda during the last three years, where it is used by government upon the erection of an extensive breakwater at Ireland Island, and is found to be very far superior to anything hitherto used for similar purposes. It has also been recently analyzed by eminent chemists in England, and pronounced by them as invaluable manure, superior to guano. In Trinidad, and several other colonies, it has been tried successfully for various purposes, and we have the attestations of reputable scientific men that, for every description of constructions under water, the pozzolano from this island is far preferable to Roman cement."

YELLOW SIBERIAN CRAB.

The above beautiful portrait faithfully represents a cluster plucked from a tree in the garden of Mr. RAYNOLDS, one of the proprietors of this paper. The whole tree, fruit and all, was the handsomest we ever saw. Every garden should have a tree of the red and yellow crab apple. The fruit is esteemed for preserving, while the tree is highly ornamental; the blossoms are white, produced in beautiful profusion in spring, and a large crop of fruit regularly follows.

Fruit about three-fourths of an inch in diameter very regularly formed and rather flat. Stalk nearly two inches long, and very slender. Calyx small, slightly sunk. Fit for preserving in September.

For the New England Farmer.

CHARCOAL.

MR. EDITOR:—Supposing the readers of the *Farmer* to have an interest in whatever may cause a more bounteous harvest, by enriching the soil, or destroying the insect tribes which so often flourish at the farmer's expense, I thought to give a brief account of the effects of charcoal on grass lands, field crops, garden and fruit trees. It was not pure coal that was used, but fine refuse coal, taken from the hearths where pine had been burned; and so necessarily mixed with the loam, with which the pits were covered, and a small quantity of ashes. Such old hearths are found in almost every New England town, particularly those at a

distance from the cities, where wood is plenty and manures scarce; hence the necessity that every thing "be turned to good account," by being made to assist the cultivator of a somewhat sterile soil, to increase the productive capacity of his farm.

Some four years since, a piece of grass land was top dressed with coal dust, at the rate of about five cords to the acre. The crop of hay was increased in quantity, and improved in quality. A part of the lot was left undressed, so the effect was readily seen. It was moist land, and such seems to be most benefited by coal.

For about ten years, I have used charcoal, composted with stable manure, for corn and potatoes. Previous to using it the corn was frequently injured, and sometimes destroyed, by worms in the spring; but now the corn is food for hogs instead of worms. On the same land, where corn was very much injured by worms ten years ago, last season, not a hill was attacked.

For potatoes, it has been used as for corn, and with equally good results. The wire-worm no longer takes up his winter quarters in this most valuable root. At the table, no special care is now required to distinguish a potato from the pepper-box. Our strong Irish propensity is not checked, at the sight of the animal and vegetable cooked in a little too near proximity.

I have somewhere seen it stated, that charcoal would prevent the potato rot, but with us it seems neither to produce nor prevent it. On a neighbor's field which I saw, they were equally rotten, in a bed of coal dust, and where there was no coal.

An old, wormy garden was spread over with a heavy coat of coal dust a few years since. The worms have died, or ceased their depredations, it matters not which, since beets, radishes and onions now grow, fit to be seen before they are eaten.

As a dressing for young trees, coal-dust has proved valuable. It checks, rather than cherishes, that bore of horticulturists—the borer. Of about thirty trees around which it was placed, hardly one has been injured; while of about the same number in a contiguous field, around which manures from the barn were spread, nearly all bear the marks of the hidden worker.

I simply state the results, and leave it for others to shed the light of science on this dark subject.

Chester, N. H., May 25, 1853. M.

REMARKS.—The results which our correspondent states, ought to lead others to copy his example in the use of coal hearths. We hope to hear from him often.

COMPOSTING.

A GOOD COMPOST FOR SANDY LAND.—Take 10 loads of stable or barnyard manure, 5 loads of clay, 20 bushels of ashes, and twenty bushels of lime; mix the whole well together, and let it remain in pile a few weeks; then turn it over, and it will be fit to apply to the land.

The above will make a better dressing for an acre of land than twenty-five loads of stable or barn-yard manure alone, and will last longer.—*American Farmer.*

In all composts intended for light, sandy soils, clay is one of the most valuable ingredients that can possibly be used. One reason why sandy lands are so little capable of vegetable production, is their want of adhesiveness. It is almost impossible to consolidate them sufficiently to secure that degree of retention so essentially and indispensably necessary to the decomposition of those organic matters which are applied in the course of cultivation as manure.

The quantity of clay required to change the constitutional texture of such lands, is necessarily great; yet with copious applications of putrescent substances, and the regular and systematic manipulations of judicious husbandry, the task of supplying as much as may be necessary effectually to ameliorate and permanently to improve the texture and productive capacity is by no means tedious.

There are few farmers who could not devote three or four days in the year, with their teams, to carting on clay from the low grounds, or to accumulating it in their yards and hog-styes, to be then worked up and composted with the voidings of the animals and other materials capable of imparting fertility to their lands.

The more clay one can afford on such improvements, the better; for there is little danger, in any case, of applying too much. Sand on clay lands, is equally beneficial, and perhaps, in most cases, even more so.

Of the different modes of applying clay, we rather prefer that of hauling it on to the land in the autumn, spread, and let the frost do its work upon it in winter.

For the New England Farmer.

MANURES—THEIR NATURE AND CONSTITUENT PRINCIPLES.

A manure may be defined to be any fertilizing compound or simple ingredient added to a soil of which it is naturally deficient; and as all cultivated lands should contain the earths, silica, carbonate of lime, clay, magnesia, decomposing organic matter, and certain saline substances, it is evident that in cases where any one of these is contained in the land in insufficient quantities for the supply of vegetables, then the addition of that substance, either in its simple or compound form, constitutes the great art of manuring. Fertilizers, therefore, naturally divide themselves into three classes.

First, the earthy, which is by far the most permanent portions of a soil, and are usually applied in the largest proportions.

Second, the organic, vegetable and animal, which are the least permanent, and are used in much smaller quantities than the earthy, and,

Third, the saline, which are the most sparingly used of all fertilizers, are the most readily absorbed by plants, and whose period of duration in the soil are longer than the organic, but less than the earthy.

A manure is either useful to vegetation by affording in a simple or a decomposed state, direct food or constituents of food, or else it is a fertilizer, by giving to the soil additional powers to absorb and retain atmospheric gases and moisture. I shall be able to explain hereafter that most manures applied to land assist in the growth of plants in both ways. Looking at the question abstractly, it must be evident that as animals receive almost the whole of their nutriment, either directly or indirectly, from the vegetable kingdom, their excrement or their decomposing bodies returning to the soil, must form the best manures. With regard to some inorganic substances, clay of the earthy manures, and some of the saline fertilizers, act principally by their absorption and retention of moisture. Gypsum and silica, it is true, enter into the composition of the grasses, and in minute proportions other salts do the same, but if we except the phosphate of lime, (the earthy parts of bones) none of the salts can be considered to be a very general direct food for plants. Davy very clearly explains the desirable objects in the fertilizing of soils: he says that the plants growing in a soil incapable of supplying them with sufficient manure or dead organized matter, are generally very low, having brown or dark green leaves, and their woody fibre abounds in earth. Those vegetating on peaty soils, he says, or on land too copiously supplied with animal or vegetable matter, rapidly expand, produce large, bright green leaves, abound in sap and generally blossom prematurely. Excess of poverty or riches, is equally fatal to the hopes of the farmer, and the true constitution of the soil, for the best crops, is that in which the earthy materials, the moisture and manure, are properly associated, and in which the decomposing vegetable or animal matter does not exceed one-fourth of the weight of the earthy constituents.

Of the organic manures, those which the most readily putrefy are the most rapid in their effects; but then, on the other hand, they are the most speedily exhausted; thus oil and fish, the most rapid of fertilizers, are exhausted by the few first crops, whilst bones, which decay more slowly, last longer in soil. The effect of chopped woollen rags is excellent for two years in heavy soils, and for three in light soils. Farm-yard manure, when applied in a style of freshness, illustrates the same result. Take two pieces of the same kind of soil and manure one of them with a mixture of dung and straw highly putrefied, and the other with the same mixture newly made, and the straw almost fresh, it will be observed that the plants grown up on the land with the putrefied dung produce a much better crop the first year than the other, but the second year the land with the fresh dung will produce far the best crop, and the same result will appear the third year, after which both will appear equally exhausted.

It is of the highest importance to the farmer that he should obtain a correct knowledge of the mode in which those manures operate which are found to be advantageous to the growth of his crops. He must discard from his mind all those false conclusions which are sometimes drawn with regard to an imaginary power assigned to plants of generating vegetable substances, for they can effect no such miraculous results. It is true they can combine the gases or elements of vegetable matters together, and form gluten, starch, gum, sugar, woody fibre, &c. They can absorb and arrange with those earths and saline bodies, but the oxygen, the carbon, the nitrogen and hydrogen of which the first named are comprised and which plants usually obtain from either the atmosphere or the decomposition of organic matter, they can no more create than they can form the lime or silica which are present in most vegetables. Davy proves this when he made a plant of oat grow in pure carbonate of lime and watered with distilled water. It grew but weakly, although it had a free supply of atmospheric air, yet the access of all dust was carefully prevented. Upon analyzing the plant it was found to have much increased in carbonate of lime, but its silica was rather diminished.

It should also be a received axiom with the farmer that there is no part of any decomposing manure, animal or vegetable, but what is either, in its gaseous or fluid state, the natural food of plants; thus the gases emitted by the putrefaction of a dung-hill are as much lost to the vegetable matters of the soil, as also the liquid that is allowed to run away from the heap, and such an injury is never submitted to by the intelligent farmer but from unavoidable necessity.

The mixing of caustic lime with dung is a most baneful practice, as it renders the ammonia caustic and volatile to the highest degree, and causes the loss of the most energetic portion of the dung. When land requires lime it should be applied separately, as the lime will in a short time absorb the oxygen from the air and form carbonate of lime and carbonic acid, in which state it is most beneficial to the soil, both for the absorbing of moisture from the air and supplying the embryo plant with carbonic acid, which is essential to its germination and future growth. But to return to my former subject. We see the value of green ma-

nures, for in these cases every portion of the decaying and fermenting fertilizer is gradually absorbed by the roots and leaves of the succeeding crops.

MATTHEW A. PERRY.

Watertown, May 16, 1853.

FOOD OF PLANTS—MODE OF SUPPLY—NOURISHMENT.

Carbon, oxygen and hydrogen exist abundantly in plants. Nitrogen is contained in them in somewhat less quantity; but is essential to their growth and nourishment. It is this last element, nitrogen, to which the cereal grains and other products owe their nutritive quality; being a principal component of gluten, which exists largely in all the grains, and most in wheat. It is on account of the greater proportion of gluten in wheat that this is more nutritious than the other grains. Wheat approaches nearer to animal flesh than most other vegetables, nitrogen and phosphate of lime being in large part the constituents of both.

These several substances which are essential to the nourishment of plants, are absorbed by them from the atmosphere, by the action of their leaves and their general surface, and also taken up from the earth by their roots. The four elementary substances named are the principal constituents of all vegetables. They, however, mostly absorb some earthy matter by their roots, as phosphate of lime already mentioned, and silica, which are in this way taken up by wheat and constitute important ingredients in the vegetable economy.

The mode by which this food is taken up and assimilated to the vegetable organism, is matter not only of curious knowledge but of most useful instruction to the farmer. And we shall, therefore, in a few words explain the process.

Most of the oxygen contained in vegetable substances is taken up by them either in combination with carbon or hydrogen. These are chiefly obtained, by respiration, from the atmosphere, by the leaves and general surface. When the first of these gases is taken in with hydrogen, the combined substances form water; when taken in with carbon the united substances form carbonic acid, the surplus oxygen escaping in respiration. Nitrogen is taken in by the plant in the same way, usually in combination with some of the other atmospheric constituents. By its union with hydrogen in the tissues of plants ammonia is formed, which is most essential to the nourishment of all vegetables. The principal supply of this substance, ammonia, is, however, taken up by the roots.

Beside the earthy matters above mentioned, silica, phosphate of lime and ammonia, potash, in some form, is found in many vegetables. Of these, each different species of plant has some one or more essential to its growth, though not requiring a large supply. The substances, in fact, absorbed from the atmosphere alone, have been found suffi-

cient to sustain the life of a tree or plant for a long time;—water, carbonic acid, and ammonia, which are taken from the atmosphere, or formed within the plant from the gases inhaled, supplying ingredients of new compounds, which are wholly sufficient to the vegetable life.

Most plants, however, require for their nourishment, and vigorous growth, something more by way of aliment than can be collected from the atmosphere. This they are enabled to obtain by their roots from the surrounding soil. Thus a great deal of moisture is taken up by the roots, and with this a small portion of the earthy matters necessary to the food of the plant. Some soils are better adapted than others to hold and furnish the needed quantity. We cannot in a brief paragraph explain the differences.

It is the office of the soil, also, to supply carbonic acid as well as water. The decay of matter in the earth continually furnishes this product, and it is also furnished to the roots, as to the leaves and aerial surface, by the atmosphere, on the two constituents of carbon and oxygen, which uniting in the tissues of the plants, form the carbonic acid. The absorption of this carbonic acid by the roots may be much assisted artificially. One way of doing this is by animal or vegetable substances in decomposition, which furnish it abundantly. It may be also assisted in other modes. Some substances absorb gases to many times their own bulk. Of these, charcoal has a great capacity for absorbing carbonic acid gas from the air. If, therefore, charcoal be placed about the roots, and an abundant supply of water given, the carbonic acid gas which is extracted from the atmosphere by the charcoal will be dissolved by the water, and with it taken up into the plant by the root.

ANALYSIS OF SOILS AND THEIR PRODUCTIONS.

At a recent meeting of the U. S. Agricultural Society at Washington, a paper was read which had been presented to the Pennsylvania Agricultural Society by Prof. Booth, of Philadelphia, on this subject. The purport was, that in the present state of chemical science not much practical benefit could accrue to the farmer, from having his soils analyzed. Soils were extremely various, the best known methods of analysis complicated, laborious, and of course, expensive. Very small quantities of some important ingredients were necessary for the crop; the difficulty of determining these minute quantities was very great; and a great degree of uncertainty attended the result.

The paper breathed throughout the caution and modesty of true science, and as it appeared to us, showed a noble disposition to be satisfied with nothing short of scientific accuracy. But the question is, may not an analysis which is not in all respects minutely accurate, be of service? We have no doubt but it may be in many cases. The danger is that the analyst will claim too much, his directions fail, and science become, in the view of

the farmer, a humbug, as we believe very many of the \$5 analyses truly are. Prof. Mapes attacked the paper of Prof. Booth with great vehemence, claiming that his positions were nearly all wrong. Considerable discussion followed, after which, it appearing that the paper was not presented for the action of the U. S. Society, but as a part of the proceedings of the Pennsylvania Society, and so far as could be ascertained, even without Prof. Booth's knowledge, it was (not withdrawn, as many reports have said,) put in the hands of the gentleman by whom the Pennsylvania proceedings were presented, to take such course as Prof. Booth should direct. As the thing was placed, the discussion was out of place, and to have directed its withdrawal would have been very uncourteous to the Pennsylvania Society.

The subject was deemed one of great importance, and there were many who wished to have the paper brought before the Society in such a manner that it could be, with propriety, discussed, and perhaps be made the basis of a report from a committee.

We have high hopes and expectations from the aid of science in the cause of agriculture; but when the best analytic chemists of the day speak with great caution on the subject of soil analysis as the director of the farmer, it should lead us not to rely too confidently on the decisions of second or third rate chemists, however confident they may be.

But analysis may be a good *councillor* where it is not entitled to the rank of *commander*. Some ingredient which should exist in considerable quantities may be so deficient that a very imperfect assay will show a defect. If those crops which require a full supply of the ingredient supposed deficient, have failed on the soil analyzed, the probability would be very strong that we were on the right track. But this last thought suggests another field for scientific analyses, which is, in our view, subject to less difficulty, and offers a richer harvest.

We refer to the analysis of the products of the soil. If it is known of what ingredients the kernel of wheat is composed, and of what the straw, we may often tell why, on some fields, a heavy growth of straw with small, poor kernels, is the usual result. It may be said that the small grain comes from the falling down of the straw; but the question is, why does the straw fall? Every one knows that it is not always because it is large. It will often fall when, if it stood up and filled well, nothing more than a medium crop could be obtained. Straw generally falls because it lacks a due portion of silica, (silex, flintstone.) It is this that adds due strength to it. Now it is true that almost, if not all soils, muck excepted, contain silex enough, but it is not in a state to be dissolved by water. If potash be added you get a silicate, a new compound, which is soluble. If common yard manure, unfermented, be applied freely to soils not well supplied with silica in a soluble state, you will get a large growth of straw, extremely weak and almost certain to fall early. But if the soil is rich from manure applied the year previous, and now well decomposed and thoroughly mixed with the earth, and a due proportion of alkalies and other ingredients of the crop are present, you may set as heavy a growth of straw standing erect and carrying to perfect

maturity thrille the weight of grain obtained in the other case. But the kernel contains a very large portion of phosphoric acid and but little silica. You may, therefore, get a good straw with a small, poor berry. We have no doubt that a shrunk berry is often, not always, but often caused by the want of a proper quantity of phosphoric acid in the soil.

Now the different crops draw, in general terms, on the same ingredients of the soil, but in extremely different proportions. While the ash of one production will be composed of fifty parts in a hundred of some particular ingredient, the ash of another will show less than one part in five hundred of that ingredient, but it will draw largely upon some other element. Hence the great value of changing crops,—rotation of crops. Every farmer should have good tables of the ingredients of the various productions of the soil, and make them his *councillors* in all his operations.—*Pittsfield Culturist*.

ANOTHER TRIAL OF PLOWS.

Stop the Plow, and if it did not stop civilization, it would give it such a blow as to stagger it almost beyond further power of progress. We wonder even now, how people subsist, and on what they subsist, in populous countries, where the plow still remains a rude and unwieldy instrument, or where it is scarcely worthy the name of an implement of husbandry, and is too ill-contrived and inefficient to remove the soil more than an inch or two in depth.

We were never more forcibly reminded of the vast importance of the Plow than in witnessing the trial of several of new and most beautiful construction on the farm of Mr. JOSE Nourse, in Ipswich, on Tuesday, the 24th of May. Several gentlemen of great practical experience were present, as well as others acquainted with the mathematical construction of the implement, among whom was Mr. Knox, the Pattern-maker in the large establishment of Messrs. Ruggles, Nourse, Mason & Co., of Boston and Worcester.

A plow to possess the necessary strength, and at the same time to lay off, and lay handsomely away, the earth, or furrow, raised by the movement of the team, must not only be constructed with mechanical skill, but upon *true mathematical principles*. The mould board must be so shaped as to roll easily away the furrow, which has been placed upon it, while those shapes must, at the same time, offer the least possible resistance to the progress of the plow. It must combine the properties both of the wedge and screw. Happily, Mr. Knox seems to understand these wants, and has accordingly given us plows which are models of mechanical skill and whose forms are fashioned by mathematical rules.

We have space at present to speak of only two of the plows used in this trial,—the Deep Tiller, No. 77, and the Double Mould-board, or Skim Plow, and a few words of a new implement called "*The Horse Hoe*."

The ground on which the trial took place was a sandy loam, never having been plowed deeper than 8 or 9 inches, free from stones, and altogether favorable for the trial.

The team, consisting of two pairs of oxen, was hitched to the Deep Tiller, and set in motion, and never before did we witness such execution with the plow. A trench 12 to 13 inches deep, and 24 inches wide, was cut and cleaned out at every round, the furrow being laid over, not entirely flat, but so as to cover every blade of grass. What an achievement! And going down, too, some 3 or 4 inches where plow had never been before. It was done quietly, and without over exertion to the team, the cattle taking an even and steady step round the land. There was almost a sublimity in this rapid change of the solid earth. In it we saw not only future harvests of swelling fruits and golden grain, but the pioneer of civilization, the triumphs of science and skill over the resisting form of the earth! An old observer remarked, that 12 oxen were formerly required to cut such a furrow with a ponderous mis-shapen machine.

On laying a ten foot pole across the plowed ground and lapping over the unplowed, it was found that the process of plowing had raised the ground six inches higher than it laid before.

The trial with the double plow was no less satisfactory. It cut a furrow 9 inches deep, and 12 inches wide, first taking off 3 inches of the turf and laying it fairly over, with both edges resting on the bottom of the previous furrow—or, in other words, leaving the centre of the turf a little the highest. It turns up and pulverizes the remaining portion of the furrow in the most desirable manner, leaving it in such condition that a trifling labor only, is necessary to prepare it for the seed. It appeared to us that the power required to plow a given depth was not as much with the double plow as with a single one.

But the operations of the "*Herse Hoe*," a new and beautiful implement, invented by the manufacturers, added a crowning grace to this interesting trial. We shall give a more particular description of it hereafter.

The Horse Hoe is the most attractive implement we have ever seen on the farm, and, after the plow, we shall be mistaken if it does not prove one of the most efficient.

Among others present on this occasion, was our Associate, Mr. F. HOLBROOK, the farmer of Vermont, as graceful with the plow handles as with the pen, and always the cool, sound, practical man.

The trial was more satisfactory than any we had before witnessed, inasmuch as the ground was more favorable, and the plows in exact working order.

Our thanks are due all the persons attending for kind attentions, and particularly to the gentlemanly proprietor of the farm.

THE FLOWERS.

BY C. D. STUART.

There is a legend old as earth,
But beautiful and true,
Which tells us how the flowers had birth,
And wherefore came the dew.

When Eve, through Satan's sore deceit,
Touched the forbidden tree,
And tempted her "good man" to eat,
The Lord came angrily;

And straightway turned from Eden's bowers
These first-born sinners forth,
Away from all its smiling flowers—
Upon the barren earth.

But pitying—ere to Heaven he passed—
His angels—brothers then—
O'er all the earth their footprints cast,
And hill, and vale, and glen,

Sparkled with flowers—Earth's starry spheres—
And ere they fled from view,
They strewed the flowers with pitying tears,
Which since has passed for dew.

And thus, though Paradise was lost
By first of human kind,
Their children know, though sorely crossed,
God's love is left behind.

HORSES—CAREFUL USE OF, &C.

An acquaintance lost his horse, a few days ago in a manner that would suggest an habitual caution in driving. The horse, a valuable one, well kept, in good spirits, and in perfect health, was taken from the stable and driven. He had ascended a long and hard hill within the first mile of driving, and as soon as the summit was reached, the driver, as is the habit of many, touched him with the whip; he sprang, stopped, staggered, and fell, and by the time the driver could alight from the carriage, he was dead. An examination showed that a large blood-vessel near the heart had been ruptured. No appearance of disease could be detected.

Now there would be in the same circumstances always a danger of a similar occurrence. Especially if the stomach should happen to be filled, as it would be directly after a full meal.

Every increase of the muscular action of any animal produces an increase in the rapidity of the circulation of the blood. This arises from two causes, one mechanical, as the compression of the blood-vessels by the muscular contraction; and one physical, as the necessity for the more rapid purification of the blood in a period of exercise.

Physiology teaches that every muscular action is attended with a waste of the material of the body, as in galvanic action when zinc is used in the circuit, at each period of action, portions of the zinc are destroyed. This waste portion of the animal solid goes into the blood and must be discharged mainly from the blood in the lungs. The more violent the muscular action, the more of this waste matter is given to the blood, and this once loaded with it is useless until it has been purified in the lungs. Consequently the blood is sent to the lungs in a vastly increased current, and the breathing becomes more rapid to introduce larger portions of air to the blood in the lungs. Here, then, are increased quantities of air in the lungs at the same time, producing a state of fullness if the lungs have full play. But if the stomach is

full and pressing upon the cavity of the lungs, it is easy to see that a great pressure of blood in the lungs and the great cavities of the heart must take place. Almost every person has experienced the sharp pain and distress produced by this state of things after having run a little way sharply, not being accustomed to the exercise. It is not difficult to see how, in this crowded state of the vessels, a sudden and powerful muscular exertion should cause a rupture of some one of the distended vessels.

When a rupture of a blood vessel does not result, oftentimes so much injury is done to the delicate membrane of the air cells as to produce an incurable heaves.

We were early taught this lesson of care in driving, by an old stage proprietor of whom we once had a pair of horses for a journey. "The only caution," said he, "I care to give you about driving, is never to start quick from the top of a hill you have just ascended. If you do you may spoil the horses' wind."—*Granite Farmer*.

THE ONION WORM.

Within a few years past, our gardeners, in many parts of the State, have been exceedingly annoyed by a little worm that would be found in the very heart of their young onions, which destroyed them entirely, if not eradicated in season. In some places it has been impossible to raise onions at all, and their cultivation has been given up. Almost every expedient has been tried to prevent the ravages of these little destroyers, but with very little effect. Indeed, there has been a good deal of obscurity in regard to the origin and habits of it, and, therefore, no very systematic course of prevention could be adopted understandingly.

We were pleased to find a chapter on this subject in the last *Granite Farmer*, communicated to that excellent paper by Hon. Edmund Burke, formerly Commissioner of Patents at Washington.

Mr. B. found that this insect laid a claim to the onion beds in his garden, and was destroying them both root and branch, affording him no prospect of having a single onion to flavor even a "hasty plate of soup" in the fall.

In searching out the causes that left him thus *onionless*, he says he found a description of it in "Kollar's work on insects injurious to gardens," and he forwards to that paper, Kollar's description and history of this insect, a part of which we here borrow for the benefit of our readers who have heretofore had cause to mourn over their desolated onion beds in the spring.

The perfect insect or fly, says Kollar, is entirely of an ash gray color in the females, with black stripes in the males, (known to naturalists by the name of *Anthomyia Ceparum*,) the wings clear like glass, with blood iridescent reflections, and yellowish brown veins. It is found throughout the summer in several generations. The larva lives during that season singly, and also gregariously on the different sorts of leeks and onions, and does great damage among the white onions, so that it often destroys the whole crop.

"The fly lays her eggs on the leaves of the onions, close to the earth. The newly hatched maggot bores through the first leaf and then descends between the leaves into the onion in its base, when it entirely destroys the bulb, which soon becomes

rotten. It leaves the onion to undergo its transformation in the earth, and becomes an elliptical, reddish-brown, wrinkled pupa, out of which the perfect fly is developed in summer, in from ten to twenty days. The later broods pass the winter in the pupa state."

The same insect is mentioned in Kirby and Spence's work on Entomology. After learning its history, I observed carefully its habits, and found them to conform precisely to the account of it given by Kollar.

So much for the description of the insect. The next thing, and a very important one, too, is to know what is the best mode of prevention, and what the best mode of destroying after you have found that you have not prevented its attacks. This has not yet been found out. Kollar says it is very difficult to destroy these insects, and Kollar speaks the truth, as all who have tried to do it will abundantly testify.

He recommends the use of powdered charcoal which he says must not be applied to every part of the bed, because it is advisable to sacrifice a portion of the crop rather than lose the whole, by leaving patches free from charcoal, where the parent fly will deposit her eggs, and when hatched, the larvæ can be easily removed in the onions left for them to devour, and be buried very deep or burnt.

This process, however, is not very sure. Charcoal ashes, tobacco water, and such like things, have been tried here with but very little success. Unless you happen to hit when the worm is on the outside of the leaf, and before it has burrowed into the stalk, you do not disturb it much, and after he gets in out of the reach of your ashes and tobacco spittle, what cares he how much you "pile on!"

Mr. Burke also says:—

"I have also learned from other sources that lime from the dry purifiers of gas works, and soot are also very efficient preventives of the ravages of this insect. And recently I have been informed that tar—raw tar sprinkled daily upon the plants, is also an effectual remedy. I was recommended by one of the Shakers of Enfield, to try ashes and lime. I made the application to my beds the present season, and succeeded in saving about one-fourth part of the crop."

We should think that raw tar, sprinkled upon the plants, could be of no particular service unless it covered them entirely, and if it did so, it would be as destructive as the worm itself, for no plant could grow encased in a coat of tar. It is probable, if tar is of any use as a preventive, it is owing to its odor being offensive to the fly, and thereby keeping it off the premises. If so, tar in cups, or on chips, placed plentifully among the onions, would be a better way of applying it. We leave the matter for further research and experiment.—*Maine Farmer.*

THE HUMAN FAMILY.—From a curious statistical digest just published in Europe, it appears that the human family numbers 7000,000,000, and the annual loss by death is 18,000,000, which produces 624,400 tons of animal matter, which in turn generates by decomposition 9,000,000 cubic feet of gases, which are cleared away from the atmosphere by vegetable matter decomposing and assimilating

them for their own uses. This is an interesting subject for philosophy.

For the New England Farmer.

MONTHLY FARMER FOR JUNE.

In green-sward or other tough hoeing, especially if the rows are rather long, and one has to work alone, there is some comfort, at least, in apportioning the work and time, and keeping a sort of reckoning of one's progress. On the same principle, I found so great convenience, last month, in parcelling out the pages of the *Farmer*, that I shall adopt the same method this month.

THE FIRST TEN PAGES.

The "Calendar," as usual, leads the dance, with pleasant thoughts and practical hints. The danger of our observation and knowledge being too much in general, too little in particular, is well put. "Passing Matters" is a specimen of the valuable articles that might be furnished by all farmers were they in the habit of recording such passing matters as almost daily make a momentary impression on their minds, then slip, and are lost to themselves and the world. Young men, especially, should cultivate the habit of committing their thoughts and impressions to writing. It was not without practice that "R. B. H." acquired the ability to paint with such life and distinctness, as he does in "Sketches of Travel." He shows us things and scenes,—villages, fields, Pennsylvania horses, wagons, barns and the Col.'s farm—all he saw, we see. Following "Plowman's Song" we have a proposition that the "State Farm at Westborough" be made a sort of model and experimental farm. The subject is continued, by another writer, on page 272, and on page 285, we notice the appointment, by the State Board of Agriculture, of a committee to confer with the Governor upon the subject. "Old Apple Trees"—Strictures and Advice on Grafting. All right, old Bach; but I have another little job for you in your knuckle-rapping line. Those folks who set out little switches of trees, high as your hat and large as your thumb, and won't allow a leaf or branch to shade the sapling lower down than the backs of the team they intend to plow with, need your opinion. But we must hurry through our first division, although we have to pass over such articles as "Rules for using Guano," which give information that probably cost the writer the price of the *Monthly Farmer* many times over; "Duration of Posts;" "Feeding Teams;" "Plan of a School House;" "Patrons, Patronage, &c."

THE SECOND TEN PAGES.

Commence with a criticism on "Experimental Farming" in the March number. In relation to the writer's idea of the soil, I will remark that in digging my barn-cellar we came upon a strata, of gravel about two inches thick, and nearly two feet below the surface. Now, this same strata, or layer, "crops out" and becomes soil,—all there is of soil,—same six or eight rods from the barn.—Then we have "Rural Pleasures," and directions for destroying "Witch Grass." To those who think of trying Mr. Penoyer's "Potato Rot Cure," I will say that for two years past, I have applied a mixture of lime and plaster by shaking it from a small ball-basket over and onto the potato vines. "Farmers' Cabinets"—A little experience, years since,

in this cabinet line, forced upon me the conviction that, for all practical purposes, there is a difference between men as they *might* be, and men as they *are*. "Insects"—The writer thinks insects are not the cause of plum-tree warts; and he even goes into a defence of the whole race. Troublesome as insects are, who knows that any of us could, after all, make a much better world, than the one in which our patience is sorely tried!—"Monthly Farmer for April."—A month behind-hand, Mr. Reviewer; but they did get along without you. Your preaching-about editors not being responsible for opinions of correspondents is "backed up" by "Inquiries and Censures," which makes the editor responsible even for the quality of the wares advertised in the columns of his paper. "Grecian Farmers," the vulgar fellows, they planted their vineyards in "rows." Passing an article on "Soil," its origin, character, &c.; and one on Manures," our second lesson endeth with some account of the ravages of "The Currant Borer," by one who keeps both his name and residence to himself. I find that something is trimming off a part of this year's growth from many of my currants. Is this the work of your borer, Mr. FAR EAST!

THE THIRD TEN PAGES.

After a notice of the Franklin County Transactions, we have a very interesting article on "Ants and Aphides,"—their curious relation to each other,—and hints on the best means of preventing the ravages of the latter. The writer says a decoction of tobacco is a sure destroyer of the aphids, but it cannot be used upon leaves. I have frequently immersed the branches of small apple trees in it with little or no injury to them. "Farmer Pennywise and Farmer Poundwise" contrasted; good "Farming Implements and Machines" recommended; "The State Farm;" a group of "Spanish Merino Ewes;" and we turn over to a catechism on "Dissolving Bones;" read a brief notice of a very desirable "New Seedling Grape," and directions for using "Shell Lime;" with a *theoretical* explanation of its operation—who will give the practical! "R. B. H.'s" *Pennsylvania Farmer* (p. 253) says the shells should not be burnt, as a burnt shell differs not essentially from stone lime, except that it contains a small quantity of phosphorus. An appeal to farmers to "Spare the Sweet Songsters," or cease complaining of the ravages of insects. From the Address of Prof. Mapes at the Franklin County Exhibition, last year, the Editor takes extracts on various topics. "Science," says the learned Professor, "means simply knowledge reduced to a system so as to be readily taught and easily understood, and therefore, every truly practical farmer must necessarily be a scientific agriculturist." Well, well; is this all there is of Scientific Agriculture! Two articles more, one a criticism on a letter from S. F., of Winchester, published in the March number of the *Monthly Farmer*, and the other, on spelling the word plow, and we have reached the first of

THE FOURTH TEN PAGES.

"Theory and Facts—do they Agree!" Sometimes they do not, that is certain. The question, however, is well discussed here. "Fruit Trees"—Inquiries about 46 Baldwin trees that were said to have produced 300 barrels of apples in each of the

years, 1850 and 1852, and some very judicious cautions against forcing trees with rich manure. Directions for raising "Early Radishes and Turnips" clean and nice, even in an old, wormy garden. Trial of the "Sod and Subsoil Plow" in Exeter, N. H. The next article, "Comparison between Ox and Horse Labor for the Farm," I am going to get round, by placing by its side that other article, by Mr. Fiske, in the latter part of our present ten pages, and the one by Mr. Dewey, in the number for March, of this year, with the single remark that I have never yet seen any such twenty years' result with horses as Mr. Dewey figures up with his oxen. The "Wash from the Sink" of a small family worth \$20—how manure is wasted! "Tired of Farming;" then "get rested as soon as you can," and up and at it again. That's it. "Cows and Oxen in Portugal" are better off, I should think from this account, than the men themselves, who "work for fifteen cents a day, and find themselves." Proceedings of "State Board of Agriculture," seventh meeting. "New and Untried Schemes"—The Reviewer handsomely reviewed. Special and exclusive might perhaps have better expressed my idea than "new and untried." I was testing the recommendation of Farmer's Libraries by this practical sort of home reasoning—Here, is our Winchester Library, costing some 5 or 600 dollars, fitted up with cases, catalogues, &c., is insured, and in care of a good librarian, who is paid 25 dollars a year for his services; all classes of our people are interested in its progress and usefulness; it has many agricultural works,—Downing's, Fessenden's, Coleman's, N. E. Farmer, *Farmer's Own Book*, &c., &c. Now, will even "our incog friend" advise the few farmers in Winchester to attempt the "new and untried scheme" of founding for themselves a special and exclusive library? Our last ten pages now close with a rap on the knuckles of the man with the jack-knife, hand-saw and meat-axe, who is yet occasionally allowed to show his skill in training up trees in the way they should go.

THE LAST EIGHT PAGES.

Give us a out and description of "Phelps's Bee Hive;" Review of the *May Farmer*; Agricultural Axioms;" No. 4 of Mr. Fowler's "Birds of New England," which one cannot read with much satisfaction while the "village boys" are up in the wood-lot a-gunning; a minute description of the appearance and habits of the insect that, the writer thinks, produces "The Black Knot on the Plum; out-lines and description of "Monamet Sweeting;" a column of "Extracts and Replies," including a notice of a Mississippi farmer, who plants some 130 acres of corn, 220 of cotton, and has 100 varieties of Pears; a recommendation of "Apples for Milch Cows," which reminds me of a little incident in my own experience—about the time of the advent of Temperance Societies, my father's cidemill gave out early one fall, the apples were gathered and sheltered in the mill, which however was not repaired, and the apples froze up; during the winter they were put into a kettle, thawed and fed out sparingly to the stock. I recollect my father estimated those frozen apples at half the value of potatoes, and that the appearance of our stock was remarked by the neighbors, as uncommonly sleek and fine. This, with the Boy's Department, completes the June number of the *Monthly Farmer*, which the more it is

studied, the closer it is read, the higher it will stand in the estimation of all.

A READER.

Winchester, June, 1853.

SOILING COWS.

The superiority of soiling over the common method of turning cattle to pasture, or in other words allowing them a free range, is strongly contended for by many at this day. The practice, so far as it at present prevails in this country, has been introduced from Europe, where it has obtained for a long time, and where certain peculiarities of soil, climate and population, render it far more necessary than it now is, or very soon can be, with us. Yet if it really possesses the high merits claimed for it by its advocates—many of whom are among the most intelligent and discriminating farmers and dairymen our country can boast of, it is certainly by no means to be neglected. We have now before us as we write, the statements of many men of this class, and among the number a gentleman of Waltham, Middlesex County, Mass., who had "four cows, and not a rod of ground which could be appropriated to pasturage. These animals, therefore, were never out of the barn or the hard yard, and were fed with grass mowed for them, with green corn fodder, which had been sown broad cast for them, and with about three pints of meal each, per day.—The amount of their produce was kept for thirteen weeks. Two of these animals were heifers of two years old, which had calves in the spring. The whole milk of one of them was taken by her calf during six out of the thirteen weeks. Some of the milk of the other was taken for family use, but the quantity was not determined. Under these circumstances three heifers could not be rated as more than one cow of full age and milk. From this stock, however, thus circumstanced and fed, *three hundred and eighty-nine pounds of butter* were made in the thirteen weeks! An additional pound would have given an average of thirty pounds a week, for the whole time, to a stock which must, in fairness, be set down as three cows only."

Where the soiling system is adopted, as it is on many farming establishments—among which we may mention that of the Shakers of New Lebanon, N. J., the superior quantity and quality of the manure is said to be sufficient to defray all the extra expense of cutting the fodder and feeding. It is all saved, the liquid as well as the solid excrement, and being preserved under cover, is of great strength and energy.

In our own practice we have been obliged to resort to this mode of feeding in order to keep stock enough to produce any thing like the amount of manure we desire to use.

By keeping the cows in the barn until about the tenth of June, our eight acres of old worn

out pasture (though as good eight acres of land as any farmer need desire,) affords eight cows a pretty good bite until a crop of "cow corn," put into a warm and rich piece of land as early as it is fit for the seed, gets high and stout enough to cut. After this there is no difficulty, as a succession of crops of this highly nutritious fodder may then be obtained until October.

INVESTMENTS IN WEEDS.

It is some six thousand years since weeds became a serious and positive evil; yet if we should judge from the undisputed empire which they appear to have obtained on some men's domains, we should very naturally suppose that this long period had not been sufficient to reveal the fact. Elders, thistles, mulleins, Johnswort, red root, chess, cockle, fox-tail, pig-weed, mustard, ox-eye, &c., consume as much of the strength of the soil on some single farms, as would furnish grain for the family's yearly supply. We have heard of many bad investments of capital, from the South Sea scheme, a century or more ago, down to the multicaulis speculation of a later day, and railroads whose only dividends were the old iron originally used in making them. But South-Sea bubbles, multicaulis humbugs and grass-covered railroads have not consumed a tithe of the money lost every year by the mighty legions of foul materials in the shape of weeds, which are secretly and openly devouring the strength of the soil in all quarters of this round globe, wherever cultivation has turned up the soil to the sun.

We do not propose to say anything new on the subject of an evil that existed even "before antiquity appears to have begun;" but perhaps we may make a few suggestions of some use, at the present juncture, when the weeds are approaching the height of their vigor, and to which the wetness of the season in many parts of the country has imparted unusual strength.

"How shall we destroy them?" This is an interesting question, but there is no "royal road" to their eradication; it must be accomplished by vigilance and labor. There are, however, different modes of attack—some laborious and expensive, and others comparatively expeditious and economical. It is our present object to point out some of these.

When weeds are newly introduced, and when only a few scattered plants have made their appearance, they may be easily and thoroughly rooted out by the hand or hoe. But when they have multiplied from a few to millions—when the numbers become swollen like the little rill to the mighty river, such a retail attempt would be as futile as trying to dip out the waters of Niagara with a quart cup. In such instances, we are to look for some means of making a wholesale sweep of them. These means will vary with the nature of the weed against which the war is declared.

We need not go into detail with the modes of destroying weeds. Those which prevail most in pastures and meadows, are commonly best exterminated by a rotation of such crops as do not favor their increase; and on the other hand, many others are checked or smothered by a heavy seeding with grass. With some, as chess, cockle, &c., especial care must be taken to sow clean seed.

Chess is remarkably insidious in the numberless ways in which its seeds get possession of the soil, besides its rapid increase under favorable circumstances, which has in some instances been five thousand fold in a single season, making five thousand plants the second season, twenty-five million the third, over a hundred thousand million the fourth, and so on, provided every facility is given to its growth. Wild mustard, like red root, increases by seed, which if buried deep, will remain dormant a long period, ready to spring into life when the soil is turned up; but being an annual; instead of a biennial like red-root, annual sown crops are not favorable to its destruction, but it is best effected by hoed crops, or by frequent plowing and harrowings.

The scythe, the hoe, the plow, and the cultivator, if kept in motion, should be looked to as the great exterminators of weeds, but there are certain crops that often prove powerful auxiliaries. Dense grass is unfriendly to nearly all weeds; buckwheat often exerts a cleansing effect on perennial rooted creepers, by its smothering influence, besides the mellowing tendency of its deep roots; but we have never seen anything equal to corn sown in thick drills, in reducing both annual and perennial weeds, as well as the tenacious grasses. Sown at the rate of three bushels per acre in furrows three feet asunder, and then covered with the harrow; dressed with the one horse cultivator when a foot high, with no hoeing, it has left the land in autumn as clean as a newly plowed field, which without its effectual shade would have presented an unbroken crop of weeds and grass as thick as they could grow.—*The Country Gentleman*.

CORN—FLAT VS. HILL CULTURE.

In your last number, under the head of "Spring Work," you express a desire to be informed as to the "relative advantages of hilling up corn, or letting it remain as planted, merely keeping it clean by horse and hand hoeing." After experimenting both ways for some time past, I have not the slightest doubt as to which mode is preferable. The planting being in rows at right angles, I simply use the Corn Cultivator crosswise, and thus leave the field mellow and level. This may be done as often as necessary; but, as it is easily done, I do it three times, and at each time let a man follow up with a hoe to repair injuries, which is done in a short time, and also to destroy the suckers at the last time. A ten acre lot can thus be easily and thoroughly dressed very soon, compared with the tedious hoeing and hilling system. It is obvious that this method decidedly economises both time and labor, as the horse and driver do nine-tenths of it on a walk. But this is not all. The stalk, having but one set of roots (which are long and strong), shoots up vigorously and well supported, and consequently is not much affected by strong winds; the growth being steady and strong, the yield is more productive; there being no furrows, ridges, or hills, but all on even surface, it is quite natural that this is the true way to resist a drought. This was abundantly demonstrated the last season, so unusually dry, with my yield.

If it be desirable to seed the field with clover and timothy, or either, it can successfully be done at the last cultivating in July, for pasture or meadow the next season. If this be done, the stalks

should be cut off close to the ground in the fall. It is surprising to see the happy effect of this way and time of seeding. I can show a field treated thus the last season, having grass six inches high and looking as rich as an old meadow of two or three years husbandry.

Persuaded that the cultivator ought to be adopted, instead of the old fashion hoeing and hilling system, I am prepared to believe that it will not be long before farmers will have but one opinion on the subject. To become fully satisfied, I think they need but one trial in a fair field. The result will readily establish this way of managing corn, for vigorous growth and yield, for security against the gale, for resisting a drought, for facility of seeding to grass, and above all, for economy of time and labor.—*Genesee Farmer*.

For the New England Farmer.

LAYING LANDS TO GRASS—STONES—TURNIPS.

Comfort for farmers in New England—Laying new land to Grass—Turnips and Super-phosphate of Lime—The Double Michigan Plow.

MY DEAR BROWN:—My professional harness has been fretting me so, of late, that even the glories of the "leafy month of June" have been floating around me for a whole week, without wholly enticing me from such antique companionship, as Coke and Blackstone.

But at length, "Richard is himself again," and now, for a season, as Daniel Webster said in his famous letter to John Taylor, "our talk is of oxen," and we will see whether we cannot render ourselves worthy of a place in the list of those "benefactors of mankind" who "make two spires of grass grow, where but one grew before." There is infinite satisfaction in overcoming difficulties, whether in mathematics, or agriculture, in conic sections, or sections of earth by the plowshare. Scott resolves all this satisfaction into "the conscious pride of art," the glory one takes to himself for doing what other men have failed to do, perhaps have not, even, had courage to attempt. "Hence we see" how much more happiness is to be derived from the cultivation of New England hills and valleys, than of a western prairie. You ought to be thankful, for the inexhaustible store of comfort treasured up for you and James, in the stones which adorn your homestead, and I for the stumps, which give such scope for genius on my new place! Shakespeare found "sermons in stones, and good in everything," and by the way, it occurs to me, that on this idea of the illustrious bard, your family need not go far from *River Cottage* to attend as much preaching as may be needful!

The great hero, who wept that he "had not another world to conquer," might have saved his foolish tears, had he been comfortably "located" on a hundred acres of New England land.

Perhaps my mode of subduing the earth, and making many spires of grass grow, where none grew before, may differ enough from the common fashion to be worth the notice of those readers of the *Farmer* who think as I do, that grass is the most profitable of all the staple crops. Having a new farm, my object has been to make grass fields, in the cheapest and most expeditious manner. I have pursued the same course on bog meadows, on

a clay loam by the river side, and on a sandy loam on the hill side, with equal success. My practice has been, to ~~the~~ *the land to grass, without first raising any hoed crop, or grain, upon it.* The common practice has been, among our farmers, first to clear the land, then take off a crop of winter rye, pasture a few years, plow up and plant with corn or potatoes, two years, and lay down to grass with oats, rye or wheat, in the spring. This may be the best mode of doing the thing, on many old farms, but it is *too long a way* to a hay crop, when one must keep a stock of cattle, and sees plainly, that hay will be worth twenty dollars a ton, next year! I have a couple of acres of upland, which you may recollect, just over the bridge, now under treatment, and I will give you the process, as an illustration of the shortest cut to a crop of hay. Late last autumn, my men dug out by the roots, all the growth, enough to make twenty cords of wood; principally, yellow pine. We dug round the trees, cut off the principal roots, attached a rope to the trunks some twenty or thirty feet from the ground, and pulled the trees over, cut them into cord wood, and hauled the wood away. We have now drawn upon the lot, about twenty loads of good compost manure. Next week we expect to burn the brush, and plow the land with a heavy plow. Three good yoke of oxen, with one man to drive, one to hold the plow, one to cut before the coulter, with a sharp axe to sever the roots; and a fourth to follow with a bog hoe to turn the balks, make up my regular team for the business. This force will thoroughly plow from one-half to two-thirds of an acre a day. Generally, I use no harrow, but level the furrows with bog hoes. This may seem an unnecessary expenditure of labor, but the object is, to finish the work without disturbing the furrow, and the harrow will often bring up the sods, so as to require more labor to remove them, than to level the whole by hand. Six men can level with hoes an acre of any land thoroughly turned over by the plow, in a day, burying the turf in the hollows, and piling up for burning, whatever roots come to light. The next step, after taking off, or burning these roots, is, to spread the manure, say seven cords to the acre. If there is need of *drains*, they must be finished before the manure is applied. Brush the manure in well with a birch brush, drawn by a horse. Sow a half bushel of herdsgrass, and a bushel of red-top to the acre, roll the land, and the business is *done*. I prefer to sow it the last of August, or early in September, but have had a full crop when I have sowed as late as the first of October. Early in spring, on one of the last *snows*, sow eight or ten pounds of clover seed to the acre. Clover generally dies in winter, if sowed in the fall. Farmers will, of course, find it for their interest to vary the details of the operation according to the condition of their land. My land is entirely free from stones, and when once properly plowed, ten or twelve inches deep, is in pretty good subjection. It is indispensable to success, that a very heavy furrow be turned and laid flat, that the small bushes and grass, may not find their way to the surface.

I have more than a dozen acres which have been treated substantially in this manner, except that most of it had been cut over, so that I had stumps instead of trees, to dig out. A stump-puller would much facilitate operations, but I have never been

able to procure one when I stood in need of it. My belief is, that land reclaimed at once, in this way, may be brought into grass with less manure, than by the common method. The usual crops of potatoes and grain exhaust the land, so that the grass runs out sooner than on land entirely new. My fields, thus made, are as smooth as old fields ordinarily are—smooth enough to be raked perfectly clean with Delano's Independent Horse-rake.

I last year laid down about a half acre, with grass seed and English turnips the last of July. Most of my turnip seed proved to be *mustard*, but not *all*, and I picked up between thirty and forty bushels of excellent turnips, with no extra labor or expense, but the gathering. I *did*, however, apply one barrel of bone-dust to the land, which was intended for the good of the turnip crop especially. I propose this year, to lay down one acre with turnips, if I can procure a bag or two of super-phosphate of lime, which is undoubtedly a powerful specific manure for all plants of the *Brassica* genus.

I am experimenting, in a small way, with the super-phosphate, this season. There is no doubt that it will prove a valuable aid to the market gardener and nurseryman. Whether it will be cheap enough for several field crops, is one of the questions. *Another* is, whether we shall ever be able to know whether the article is genuine, or a humbug. I am using Mapes's, and think well of it, so far. One of my neighbors is using another stamp, and thinks it an imposition. We shall be ready to say more of it by and by.

Many of our farmers are adopting the practice of turning over their grass lands after haying, applying a dressing of compost, and seeding again to grass. I think well of this method, having tried it with success. With the help of the Michigan Double Plow, the work can be done to perfection. I have top-dressed my grass-land a good deal, but am convinced, that as a general practice, it is a waste of manure, that is to say, that it is not the most economical mode of using it. There may be low places, on every farm, where top-dressing may be judicious.

And now, friend Brown, I want you to try one acre of your land, with grass seed and turnips, manured with the super-phosphate. Your hill pasture will not be injured by the experiment, I am confident. "Verbum Sap," &c.

Yours, H. F. FRENCH.

Exeter, N. H., June 8, 1853.

PRODUCTIVE FARMING.

In a treatise on Productive Farming just issued from the press, the following observations occur:—"It is in vegetable as in animal life; a mother crams her child exclusively with arrow root—it becomes fat, it is true, but, alas! it is rickety, and gets its teeth very slowly, and with difficulty. Mamma is ignorant, or never thinks, that her offspring can not make bone—or what is the same thing, phosphate of lime, the principle bulk of bone—out of starch. It does its best; and were it not for a little milk and bread, perhaps now and then a little meat and soup, it would have no bones and teeth at all. Farmers keep poultry; and what is true of fowls is true of a cabbage, a turnip, or an ear of wheat. If we mix with the

food of fowls a sufficient quantity of egg-shells or chalk, which they eat greedily, they will lay many more eggs than before. A well-fed fowl is disposed to lay a vast number of eggs, but can not do so without the materials for the shells, however nourishing in other respects her food may be. A fowl, with the best will in the world, not finding any lime in the soil, nor mortar from walls, nor calcareous matter in her food, is incapacitated from laying any eggs at all. Let farmers lay such facts as these, which are matters of common observation, to heart, and transfer the analogy, as they justly may do, to the habits of plants, which are as truly alive, and answer as closely to evil or judicious treatment, as their own horses."

THE NORTH AMERICAN SYLVA.

We have examined with much gratification the splendid work of MICHAUX and NUTTALL, now republished in this country, at Philadelphia. No recommendation of the work to our readers would be too strong, in urging them to purchase it.—Hundreds of them can spare the \$45.00 required, and experience no inconvenience, while they would find much instruction and gratification in their perusal. They would also subserve the cause of scientific investigation.

We adopt the language of the *Horticulturist*, in its notice of the new edition of the work, and only regret that our limited means will not allow us the privilege of always having it at hand.

We are happy to learn that the superb edition of this great national work, published by Mr. SMITH, is in such demand that copies cannot be supplied as fast as they are called for. This speaks well for the growth of taste among the American people and for the interest they are taking in the productions of their own forests. It is a work that deserves the most complete success, not only for the important information which it contains, but for its elegance. The style of the engravings is good, and the coloring, done in this country, is, in many respects, equal to the original French edition. Those editions have long been out of print, commanding, before this appeared, no less than one hundred dollars a copy; that price was offered to our late American Ambassador in London for MICHAUX alone. The present edition, better translated than the English one which appeared in Paris, is now to be procured for *twenty-four dollars*; and with NUTTALL's Continuation, also, in three superb volumes, the whole is offered for *forty-five dollars*.

From the nature of this work it can never become a "common book;" indeed, to possess it will always confer a sort of distinction. It is even now somewhat difficult to procure a copy of this new edition, so much time is necessarily employed in coloring the plates by hand, as so few artists exist in this country who can be trusted to work upon them. They give regular support to a number of ladies and gentlemen who do little else than color from morning to night. The result is, pictures entirely fit to be framed for ornamenting a drawing-room. By a little study of its valuable plates and comprehensive letter press, all may identify the products of our splendid forests, and

learn to love what is so beautiful and worthy of study. If it were only to be able to know exactly all our American Oaks, or if they only were figured by this master of engraving, the work would be cheap, nay invaluable; but in addition, we have in MICHAUX and NUTTALL all the trees of our continent. The first named author described the trees of the Atlantic slope, and NUTTALL continued the labor to the Pacific, including Oregon and California. The trees from these new possessions are already finding their way to our nurseries and gardens, and NUTTALL's volumes are therefore indispensable, for his are the only descriptions extant of these western novelties.

Mr. SMITH, the editor, happily remarks in his introduction, "It was a singular circumstance, and a happy one for advancing science, that Mr. NUTTALL arrived in this country the very year that the younger MICHAUX left it."

The two works are now one and homogenous; the former most highly valued by all lovers of trees, and the latter destined to be equally so."

The elder MICHAUX is deceased, having fallen a sacrifice to his scientific zeal on the coast of Madagascar; REDONTE, the engraver, who has left such a world-wide reputation by his engravings of the work, the *Liliaceae Rosaceae*, &c., is no more; both Mr. MACLURE and Dr. MORTON have lately paid the debt of nature.

The elder MICHAUX commenced the "Sylva," by describing the Oaks of America; his son, F. ANDRE MICHAUX, who completed it, still survives, and resides in Paris, at the age of eighty-three years. He displayed a vocation for the natural sciences at an early age, and accompanied his father on his voyage to America. In 1802 he was employed by the French government to explore the country west of the Alleghany mountains, and published in 1804 his travels in that then distant and almost unexplored region. A second volume contained a memoir on the naturalization of roots of American forest trees in France. In 1810 he published the *Sylva*. No country can boast a more magnificent or useful account of any part of its natural production; it unites the advantages of a work strictly botanical, and of one relating to the useful arts, collecting all the scattered details which books or experience could furnish him, with respect to the application of the various kinds of wood to the purposes of life, which are extremely useful and important at the present day. The fame of both father and son may be regarded as the common inheritance of France and the United States.

FARMING INCONSISTENCIES.—Farmers dig their gardens two feet deep, but only plow their land five inches. They take especial care of their nag horses in a good warm stable, but expose their farm horses and cattle to all weathers. They deny the utility of drainage in strong tenacious clays, but dare not dig an underground cellar in such soils, because the water would get in. They waste their liquid manure, but buy guano from Peru to repair the loss; and some practical men, who are in ecstasies with the urine of the sheep-fold, have been known seriously to doubt the benefit of manure. But it may be asked, "Where is the capital to come from for all these improvements!" The reply will be, "Where does the

capital come from to make railways and docks, to build steam vessels, to erect a whole town of new squares and streets, and to carry out every other useful and profitable undertaking.

For the New England Farmer.

WITCH GRASS—STATE CHEMIST.

FRIEND BROWN:—In the June number of your excellent *Farmer* I see an article on Witch Grass, in which you give a description of the various means resorted to, to free our soil from this most stubborn and troublesome occupant. The remedies you propose are much more expensive and tedious than I think is required. And as I have had to battle with it for the past ten years, I will, with your permission, give you the outlines of the course I have pursued, which is very simple, and has proved entirely successful.

It is this. Let the first plowing be rather late in the spring; not till after the witch grass is pretty well up. Let the ground remain some four or five days after plowing—then harrow, and ridge up as you would for carrots, let it remain in this condition some three or four days, watch for a hot sun, and throw open the ridges with a cultivator. Let it remain in this way some two or three days, then ridge again as before—and by following out the process of ridging and throwing open with the cultivator twice, you may be sure you have destroyed the witch grass, and for succeeding years too, providing you plant a crop that will cover the ground pretty quick. As I have occasion to use a large quantity of corn fodder, (which by the way, is the most profitable crop I believe that can be raised, for green feeding to milch cows,) I usually plant this. You perceive that it will be towards the first of June before you can have gone thoroughly through with this process, but still in ample time for corn fodder, potatoes, or even field corn—but one of these crops is better than any other I think of, to make complete clearing out, both of root and branch. The advantage of this plan over any other is, that you can do it all with your plow and cultivator, making a great saving in hand labor, and without being under the necessity of removing any of the roots from the field—let them remain—they will all disappear in the course of the season. So that the second year you wouldn't know there had ever been a root in the ground. I am now, (the 7th of June,) working a piece of land in the way I have described, and if you have any that you wish to try my plan upon, just let me know the result.

I notice, what I am sorry for, that the State Board of Agriculture report against the employment of a State chemist. You say the committee are "fully impressed with the importance of such operations and knowledge, but are still of the opinion that the time has not yet arrived when it will be expedient to recommend any distinct action on the subject."

Now as you are a member of the Board, it is quite possible you can give your readers some good reason for such a conclusion. For my own part, I know of none. If you wait for our State Legislatures to propose any thing of the kind, the time is surely a great way off, for action;—there can be no political capital made out of all this matter of agriculture, it is too common a thing altogether, for so wise and dignified a body to meddle with.

How long will the people remain contented and satisfied with all this, can you tell me, friend Brown? If so I wish you would. For one, I am ready to move—and let the people move, through their County Societies, and Conventions; and in my humble opinion, we shall see some movements through our State authorities different from that we have yet seen. I have written enough for once, and will stop. Yours, J. H. R.

Dorchester, June 7th, 1853.

REMARKS.—Thank you, friend R., for the above, and hope that now your pen is in motion, we shall hear from you often.

With regard to the appointment of a State Chemist, our own convictions corresponded with the report of the Committee. Our rule of practice would be like that of the miller; that is, to keep the means of improvement always ready, as he keeps his hopper filled with corn, but not to supply it faster than it can be received and well ground. We would scatter the higher agricultural information as all other knowledge is spread, when it will fall, not upon a rock, but upon a soil prepared in some degree to receive it. The mind may be overburdened, as well as the mill-stones, and by attempting too much, you gain nothing, but actually retard the natural current.

EDUCATION OF OXEN.

A "Glenburn Farmer," in the *Bangor Whig*, contends that the practice of testing the merits of working oxen, at cattle shows, by the mere ability to drag the heaviest possible burden, is unsatisfactory and unsafe, as not exhibiting the most valuable qualities of the animals, nor showing their most useful capacities in the performance of their ordinary work. We annex a part of his sensible remarks:

"I would suggest that at the next trial of oxen at the Society's Show, it would be upon a judiciously loaded cart, and that the exercise should consist of drawing, turning, and backing. What the public want in regard to working oxen, is an exhibition of the best trained cattle for farm purposes. Nor is this all. We want to see the man who trained them, and his manner of doing it. We want an exhibition of good teamsters as well as good teams; for very much of the merit of a yoke or team of cattle belong to the teamsters. And instead of giving all the premiums to good oxen, one-half at least should go to good drivers. No driver, however, should receive a premium for himself or oxen, however good they may be, who uses profane language during the exhibition. A rule of this kind would have changed the direction of more than one premium at the late trial.

"Good teamsters are worth from five to ten dollars a month more than poor ones; and yet, with this difference in price, it is very easy to find a hundred, and I might say a thousand, poor ones for one good one. No man can be a good teamster who is not a gentleman. He must be gentle, kind and careful. No good teamster will put his oxen to an unnecessary waste of strength, or to unnecessary pain, by the use of the good stick or brad.—*Wisconsin Farmer.*

HINTS ON THINNING FRUIT.

The prospects of an abundant fruit crop throughout most of the fruit-growing regions of this country, have scarcely ever been better, according to the best information we can obtain, than they are the present season. The winter was of more than an average mildness; and the spring, though early, has been cool, without any violent changes likely to affect the fruit buds. At the present moment (May 14th) peaches, cherries, and pears, show a remarkable profusion of blossoms. The temperature is lower than we could wish it to be, and for several nights there has been here a light frost, but owing to the dryness of the atmosphere, it has not, as far as we are able to judge, done any serious injury. Everything looks promising. Last season the crop was very light generally—in many localities a total failure; and this will contribute much to the abundance of this season's crop.

Now we wish to offer a few hints in regard to certain precautions, which the circumstances call for; that is, provided the crop will be as heavy as we have reason to anticipate. It is very well known that in favorable seasons, after a failure especially, trees bear too much. It is very common to see them so loaded with fruit as not only to cease growing entirely, but to bend and break down under its weight. This should be guarded against. Trees are in a multitude of cases enfeebled, broken, contract diseases, and are, in short, ruined by excessive bearing; and every man who appreciates the value of a full grown bearing tree, worth from \$100 to \$500 as the case may be, should guard against such a result as carefully as he would his ox or his horse against excessive labor that would be certain to injure or kill them.

Trees, like animals, have constitutions that can, by proper treatment, be kept sound for a great length of time, or by neglect, or bad treatment, broken down. Our opinion is that the feeble, diseased, and short-lived condition of the peach tree in New Jersey, is due, in a great measure, to a greedy or careless system of over-cropping. We know how races of men and horses degenerate, from hard labor and bad treatment—how they dwindle down in size, lose their proportion, symmetry and intelligence—in short, wear out, to use a very common but expressive term. Trees "wear out," too. How many we have all seen that in their youth, even before they had arrived at a full bearing age and size, began to look old—the branches twisted and knarly, the bark rough and mossy and all covered with small, feeble, ill-formed buds and fruit spurs, loaded perhaps with small, worthless fruit, not worth picking up.

Now those who desire to guard their trees against wearing out, must not be too greedy of a great crop. They must master that natural reluctance we all feel to pick off a portion of the fruit. They must thin them out so as to leave them evenly distributed over the tree, and only so many as can be brought to full and perfect maturity without injury or death to the tree. But we shall be asked, "How are we to know how many we ought to leave or how many to take?" Well, we confess it takes some little skill and experience to thin a crop judiciously, but he who goes about in earnest will find some indications to aid him. It will not do to thin in all cases alike, because the vigorous tree, in a generous soil, will carry a large crop without injury, and one that would

be almost certain death to a delicate or feeble tree having limited resources in the way of food, just as a healthy, robust, well-fed man can perform a day's work with ease that a weakly, ill-fed man dare not attempt. The growth of a tree, the appearance of its foliage, the length and thickness of its young shoots, afford a very reliable guide as to the vigor of a tree and its ability to bear a heavy crop. Some varieties are naturally moderate and constant bearers, and if kept under good culture might never require thinning, while others bear enormously some years, the fruit actually covering every part of the tree and requiring props and supports to keep it from being torn to pieces. Such trees cannot bear so in successive years, nor can they long remain healthy. Then beside thinning the fruits, good culture must be given them in their fruitful years, and top-dressings of composts in a well decayed state. Garden trees may have liquid manure and mulching instead of top-dressing. Such care as this, not costing much, will not only sustain the vigor and health of trees, but produce large, handsome, marketable fruits. When a tree is loaded to breaking down, one-half or three-fourths of the fruit is worthless, and all the advantage of a large crop is lost.

We consider this subject of much importance to the fruit grower. We know by ample experience that it is. We crop our own trees heavily, perhaps too heavily; but every season we have to perform a thinning process, and we should consider the neglect of it nothing less than the wilful destruction of our trees.—*Genesee Farmer*.

For the New England Farmer.

FARM SCHOOL AT WESTBORO'.

MR. BROWN:—I am pleased to see the attention of the public called to the uses that should be made of the State farm at Westboro'. Here are hundreds of boys, that are from year to year to be scattered abroad in the community, dependent on their own exertions for a living;—starting under the necessity of having their first impressions eradicated. How important then that they be guided right! That they be so instructed as to be useful and respectable in the stations they may be called to fill! Suppose each of these boys to be thoroughly instructed in the operations required of the farmer, so that he could take the charge of this class of labor;—and that the young men who may go out from this institution, should have the reputation of being there instructed; would there be any question of their finding immediate employment! It is safe to say, there would not. How important then, for the young men, and for the community, that they be thus instructed.

If special care be not taken, so to instruct them, they will assuredly be bad. As well may you attempt to confine a multitude in a close room, without ventilation, and expect the air to remain pure, as to expect a multitude of youth, when congregated together, without employment, to retain their purity. All experience proves the evils of such associations. Satan always finds employment for the idle. When good is not doing, mischief will be brewing.

But sir, short stories are best. I hope those who have the power, will not be unmindful or neglectful of their duty.

May 31, 1853.

For the New England Farmer.

CORN-FODDER, AND CORN-STALK CUTTER.

The advantages of cutting up corn-fodder and mixing meal with it, for the feeding of cattle, particularly during a winter when hay is scarce and of a high price, were lately illustrated at the farm of Levi A. Dowley, Esq., in Brattleboro'. Mr. Dowley having a numerous stock to winter, and hay being worth fifteen dollars per ton, and not plenty at that price, he was induced to try the experiment of cutting corn-stalks and mixing meal with them, as a substitute for hay in the feeding of a portion of his cattle. Eleven cows, six steers coming four, six coming three, and ten coming two, years of age,—in all, thirty-three animals—were accordingly separated from the fattening cattle, and fed from about the first of December to the first of March last, with thirty-three bushels, each morning, of finely-chopped stalks moistened with water and then three pecks of meal mixed through the mass, with a like quantity each evening, and with uncut oat straw each noon. The meal was a mixture of Indian corn and of oil meal, in the proportion of three quarts of the latter to twenty one of the former.

The stalks fed during the three months as above mentioned, were a part of the crop grown on eighteen acres of land planted with corn last season, and yielding an unusually great product, both of grain and stalks. The entire crop was cut up at the surface of the ground, before the autumnal frosts appeared, and while the stalks were yet green and succulent, was well cured in the field, and then, after husking, the fodder was placed in shed lofts and over the barn floors, so that it came out in the winter fresh and sweet.

Some less than two-thirds of the quantity of fodder produced on the eighteen acres, was consumed by these cattle, during the period of three months ending on the first of March; and it was calculated that if the whole product of the same grown thereon, had been cut and fed as during the three months, it would have kept this lot of stock till the first of June: but on the first of March, it was quite apparent that the hay on hand would be sufficient for the feeding of the entire farm stock till grass-time; and accordingly the thirty-three animals received their portion of the hay night and morning with the other stock, and the balance of the corn forage was thrown about the yards during the day, the best of it eaten, and the coarser parts trampled under foot for litter and manure.

The wages and board of one man formed the extra expense incurred by reason of passing the stalks through the chaff-cutter, moistening them with water, adding the meal and feeding the prepared mass to the animals. The person employed for this purpose was paid twelve dollars per month, and his board may be called eight dollars per month—making an extra monthly expense of twenty dollars. The amount and value of the corn and oil meal fed each of the three months may be called—39 bushels of corn meal at 83 cents per bushel,—\$32.37; and 6 bushels of oil meal at 78 cents per bushel,—\$4.68; making a total cost of meal per month of \$37.05.

Prices of labor, board, and of forage and proven-der varying more or less with different localities,

no nice calculation of the exact cost or saving of this mode of feeding will here be made; but from the details that are given, each reader may draw his own conclusions of the expediency or otherwise of the same. Suffice it to say, that the experiment resulted satisfactorily to the projector of it, the animals were healthy during its continuance, and in good flesh at its conclusion.

The corn fodder was reduced to a complete state of chaff, or was cut in pieces one-quarter to one-half inch long, by a stalk-cutter invented and manufactured by Reuben Daniels, at Woodstock, Vt. It is a good machine, perhaps the best chaff-cutter yet made for reducing corn stalks to a fit state for being fed with meal; and it may be gauged to cut hay, straw, &c., to any length, from four inches to one-fourth of an inch. However, it has not, perhaps, all that capacity to take in, and to cut corn stalks as rapidly as one could desire.

We farmers are very much in want of a powerful, effective chaff-cutter, which shall take in a generous mouthful of corn stalks, cutting them very fine, and having that capacity of fly wheel and of geerings which shall cause the machine to work with facility and expedition by the application of the turning-power of one man. There are various machines, denominated hay cutters, in the market, which are well adapted to the purpose their name indicates; but they are wholly inadequate to the proper and profitable cutting of corn fodder—the very quality of forage which most needs improvement by being reduced to a fine and soft state, and by the addition of meal. If our agricultural machine-makers could but invent the right cutter for this business, they would confer an important benefit upon the farmers, as well as find a ready sale for such invention. Quite an additional breadth of corn and other coarse forage would be grown for winter feeding, if money could only purchase a suitable machine for quickly and cheaply reducing such forage to a proper state for economical feeding.

F. HOLBROOK.

Brattleboro', June 8, 1853.

TOWN HORTICULTURAL SOCIETIES.

—“To deck the shapely knoll
That softly swell'd, and gaily dress'd appears
A flow'ry island from the dark green lawn
Emerging, must be deemed a labor due
To no mean hand, and asks the touch of taste.”

MR. EDITOR:—Conversing with a friend in Massachusetts, a few days ago, I was much interested with his plan for the formation of town horticultural societies. Through his agency, such a society exists in Andover, Mass., which has been found both useful and pleasant to its members. Before the existence of this society, little interest was felt in ornamental flowers and shrubs or in scientific gardening. Through the agency of a single individual, Dr. Eastman Sanborn, of that village, a warm interest has been awakened in horticulture. Dr. Sanborn is enthusiastic in the culture of fruits and flowers; and like every other earnest and true patriot, he imparts both of his zeal and his choice flowers to others. When his neighbors see the beauty and inhale the fragrance of the beautiful products of his industry and skill, they admire his plan of creating comfort and happiness at home, and “go and do likewise.” It is not enough to *see* and *smell* a beautiful flower while it lasts, one likes to have it with him; and when

a person has enjoyed the society and sweet language of a single flower, he, like Oliver Twist, always "asks for more."

The Andover Society holds regular meetings, and furnishes occasional exhibitions of fruits and flowers. Each member saves seeds from his own garden, for exchange with other societies and with the Patent Office at Washington. Thus they secure to themselves the most valuable specimens of flowers, fruits, plants, shrubs, and edible roots, which the gardens of the world afford.

They may make horticulture a source of income, if they choose; they cannot fail to make it a source of pleasure. The love of flowers is one of the most innocent, pure, and healthy affections of the human soul. There is no rivalry or loss of love in it. The passion never decays, but actually "grows by what it feeds on." It interferes with no duties, domestic or public, but adds a new charm to both and gilds with "the purple light of love" all the asperities and inequalities of life.

The biographer of the Empress Josephine mentions it, to her credit, that she was fond of flowers; and adds that this passion in females usually indicates a gentle temper and a loving heart. If this be the fact, in relation to females, the cultivation of flowers may have very important bearings upon their prospects in life.

The formation of village societies for improvement in experimental gardening is, certainly, worthy of consideration. If our citizens are indifferent to the ornamental part of horticulture, they cannot be so, with reference to the *useful and productive* department. The berries, fruits, plums, currants and edible roots of a well cultivated garden add very essentially to the substantial enjoyments of life. They also contribute greatly to the ordinary support of a family.

The *quantity* and *quality* of these comforts of a farmer's life may be materially improved by skill and industry. The skill may be acquired by comparing notes at a horticultural meeting and by personal experiments. The reward is certain. Let those who feel any interest in the welfare of their respective communities, consider these suggestions and resolve to act.—*Granite Farmer.*

THE CLIMATE OF COUNTRIES.

Although Edinburgh, in great Britain, is situated ten degrees farther north than the city of New York, it has a much warmer climate in winter, and the heat and cold never attain to such extremes. The climate of England is, to the majority of our people, a mystery. The island is situated between 50 and 55 deg. north latitude, and it has a milder climate than we enjoy in the latitudes of 40 and 45 deg. The British Isles are situated in the path of warm ocean currents, which flow across the Atlantic and beat upon and circulate around them. The wild Orkney Islands, which are situated in 59 deg. 5 minutes, have warmer winters than we have in New York city, which is situated about 17 deg. further south. In the city of Glasgow, the mean temperature in the month of January is 38 deg., and it has never been below zero but twice in forty years, and then only 3 deg. for two days. In Unst, in the Shetland Isles, in latitude 60 deg., 5 min., the mean temperature in January is 40 deg. In many places of the United States, ranging from New York to Maine, in lat. 45 deg.,

the mean temperature is 6 deg. below zero. Unst is only one degree colder than Constantinople, in January, and no country in Europe, nor the world, perhaps, enjoys the mildness of climate peculiar to Great Britain and Ireland. This must have a wonderful effect upon the health and organization of the people. The cause is, as we have stated, generally attributed to the currents of the Gulf Stream: one philosopher, however, attributes the genial warmth to moist breezes from Africa, which come over the Atlantic, crossing the equator. In Russia, Moscow is on the same line with Edinburgh, yet its temperature in winter is at least 13 deg. lower. The climate of England is moist and wet. To foreigners, accustomed to clear skies, it is disagreeable. The atmosphere is cloudy in summer, and this is one reason why it is not so warm as in other countries in the same northern latitude. Were it not for the warm ocean currents and the warm breezes, the coasts of England would be ice-bound, and many of the plants which now flourish there as evergreens, would be unknown.

On the northern coast of our continent—in northern Oregon—the climate is much warmer in winter than in places on the same lines of latitude in our Eastern States. It is believed that currents from the orient flow over the Pacific and wash the Oregon shores, as the Gulf Stream of the Atlantic does the British Isles. During the past winter the thermometer ranged at 17 deg. above zero, and the prairies were green all the time, except when covered by occasional snow storms. The farmer is not compelled, as in the Eastern States, to depend for the winter sustenance of his cattle on hay raised the previous season; his cattle can graze there throughout the whole year, and wild flowers may often be plucked in the months of January and February.—*Scientific American.*

THE FIRST SAW MILL.

The old practice in making boards was to split up the logs with wedges; and inconvenient as the practice was, it was no easy thing to persuade the world that it could be done in any better way. Saw mills were first used in Europe in the 15th century; but, so lately as 1555, an English Ambassador, having seen a saw-mill in France, thought it a novelty which deserved a particular description. It is amusing to see how the aversion to labor saving machinery has always agitated England. The first saw-mill was established by a Dutchman, in 1663; but the public outcry against the new-fangled machine was so violent, that the proprietor was forced to decamp with more expedition than ever a Dutchman did before. The evil was thus kept out of England for several years, or rather generations; but in 1758, an unlucky timber merchant, hoping that after so long a time the public would be less watchful of its own interest, made a rash attempt to construct another mill. The guardians of the public welfare, however, were on the alert, and a conscientious mob at once collected and pulled the mill to pieces. Such patriotic spirit could not always last, and now, though we have nowhere seen the fact distinctly stated, there is reason to believe that saw-mills are used in England.

☞ Drinking water neither makes a man sick, nor in debt, nor his wife a widow.

For the New England Farmer.

FANCY LOP-EAR RABBITS.

MR. EDITOR:—Above I hand you a drawing from life of a doe and young, of the *English Lop-eared Rabbits*—such as are now bred to a wide extent in Great Britain, and which are very highly esteemed for the table, when fattened, or as pets with amateurs.

This tribe are beautiful creatures, are very easily reared, and have proved a most interesting addition to the stock of fanciers who have bred them. In England, they receive a good share of attention, and clubs exist there in all the large cities and towns who hold annual exhibitions, at which a good deal of competition is evinced for superiority.

My stock I imported last spring from London, Liverpool and Dublin; and I shall be happy to show it to those interested, at my residence, in Melrose. The peculiarities of this race consist chiefly in their great size, their fine colors, and their long pendant ears. They are exceedingly prolific—breeding six or seven times in a year—and may be kept advantageously in a very small space.

My rabbitry occupies a building 12 by 30 feet. The animals are confined in hutches three feet long and two feet wide. These hutches, (or apartments,) are ranged in tiers, one over another, five on a tier; and each rabbit occupies a separate hutch. The young are taken from the mother at our to six weeks old, and are afterwards kept to-

gether (six to ten,) in a larger hutch, in a separate room of the rabbitry. They are ready for breeding at 6 to 8 months old.

I am not aware that these pretty animals are now very extensively bred in this country, Mr. Rotch, of Morris, N. Y., and Mr. Rodman, of Dedham, being the only gentlemen that I know, who have fine stock; yet I think we shall very soon see more of them, from the fact that there is at present a good deal of inquiry for them, at home and abroad.

I am yours, &c.,

GEO. P. BURNHAM.

For the New England Farmer.

STATE PAUPER FARM.

MR. EDITOR:—In my remarks upon the pauper farm at Tewksbury, I said, "If the good people of this State expect that the farm will contribute in any important degree to sustain the establishment, they will be disappointed." But from this, it by no means follows, that it is unwise or ill-judged, to connect a farm with the institution. As I remarked, "it will furnish potatoes, garden vegetables, and milk." It will do more; it will furnish employment to a portion of the inmates for a part of the year at least. To furnish employment, and especially profitable employment, to the inmates of such institutions, has ever been the most difficult problem to solve in connection with them. It will afford many conveniences to the institution and contribute very much to its beauty and agreeable-

ness. It will furnish to invalids and to those recovering from sickness, ample grounds in which to take air and exercise, and by allowing the lines of enclosure to be removed to a greater distance from the house, will diminish its prison-like appearance.

Its moral effect also upon the people in the house, is by no means to be overlooked. Almost every human being, however ignorant and degraded, is influenced by the circumstances in which he is placed, by the scenery by which he is surrounded. The people who will occupy this establishment, will be more easily governed and kept in proper order, in a neat, convenient, well arranged house, and in grounds adorned with beautiful trees and flowers, and with avenues well kept and clean, than they would in a house in which no regard was paid to appearances, and in whose arrangements good taste had not been consulted. There is in every human heart a chord that vibrates responsive to the voices of nature and of beauty; and by these gentle voices, the most rugged and savage nature is softened and humanized. It is by no means, a matter of indifference, by what grounds and by what scenery, this and similar institutions are surrounded. But not to enlarge upon this subject, there is another reason why it is well that farms have been connected with the pauper establishment of the State. I notice by the report of the last meeting of the Board of Agricultural Commissioners, that the subject of appropriating a portion of the Reform School farm, to the purposes of experimental farming, was taken up and referred to a committee who are to confer with the Governor in respect to it. I see no reason why a portion of each of the pauper farms may not be devoted to a similar use, without diminishing in any material degree its economical value to the State. A series of scientific experiments might be accurately conducted with respect to the adaptedness of certain seeds and plants and fruits to the climate and soil of New England; with regard to the value of different kinds of manure, both natural and artificial; with regard to the kind of manure which different vegetables require; with regard to different modes of cultivating crops of established value; with regard to the feeding of stock, the value of different articles of nutriment, and their effect in producing muscle and fat, and the amount and quality of milk. We need a series of accurate experiments upon all these and many other subjects, and if their processes and results were carefully stated, they would be of inestimable value to the farmers and gardeners of the State. I have had occasion to observe before, in your paper, that the deductions of science, especially when they relate to subjects possessing vitality, need to be verified by experiment. When they relate to dead matter, if the circumstances are all known, they may be more safely relied on. But when they relate to subjects modified by the vital power, a power with regard to whose essence we know absolutely nothing, and with regard to whose laws we know but little, then they are to be relied on no farther than they are justified by actual experiment. The State now owns three farms, situated in sections distant from each other, and different series, or different classes of experiments, might be instituted upon each of them.

For instance, the Tewksbury farm is situated in

a fruit-growing section of the State. The geological formation of all that region indicates its adaptedness to the cultivation of the apple; and were this indication wanting, the success of the fruit growers of Bedford, Billerica, North Tewksbury, Wilmington and Andover, proves this region suited to the cultivation of fruit. The Woodpecker or Baldwin, was first found in Burlington, but a few miles distant, and first cultivated to any extent, in Woburn and Wilmington, by Col. Baldwin and Capt. Jacques. The farm itself is admirably situated for the cultivation of fruit. The whole plat of ground on which the buildings are situated, would make a splendid orchard; some subsoil draining might perhaps be required of a portion of it. Considerable portions of it might be appropriated to the cultivation of different kinds of fruit, and to grafting and budding upon different kinds of stocks without interfering essentially with the production of vegetables for the establishment. A portion of the farm has a soil well adapted to the cultivation of garden seeds, and perhaps a part of the females in the house might be profitably employed in this kind of culture.

The stock owned by the State Agricultural Society might be kept at Southboro', and this might be made the stock farm of the State. Grains and grasses might be cultivated at Palmer, and thus the Agricultural Board or its Secretary might have an interest in each of them, and by visits and suggestions, by supplying seeds and plants, and artificial manures, and in various ways, might contribute to their agricultural success, and by collecting the results of these various experiments, and laying them before the public, they might accomplish one important end for which they were appointed.

J. R.

Concord, June 14, 1853.

For the New England Farmer.

STATE REFORM SCHOOL.

MR. EDITOR:—The discriminating notice of the Institution for the reformation of disobedient boys, established by the State at Westboro', by the munificent donation of the late Gen. Lyman, contained in your paper of this date, is worthy of more than one perusal. Having participated in the view of the condition of the Institution, as it appeared on the 1st of June, I thought I might be excused in a few suggestions, for which you did not find space.

First, as to the *personal cleanliness* of the boys. If I do not mistake, there was a great deficiency. Their *hands* and their *faces* looked as though *water was scarce and soap dear*. Their *heads* too, it makes me *crawl all over* to think of them. Such things ought not to be. Who can wonder that deaths should be sudden and frequent, under such circumstances? One poor fellow from Salem, it was said, died the week previous, after an illness of only *four hours*; was this *cholera*? It cannot be called *Asiatic Cholera*. One gentleman remarked, he died of *rotten potatoes*—and when the cellar was examined, there was no want of proof on this point. Such an effluvia as pervaded the establishment entire, from decaying vegetables, I have never before met. Perhaps it was worse at that time, as they were then occupied in clearing the cellar. The *error* was in ever putting them there, or certainly in suffering them to remain, until they rotted.

Second, as to the *occupation* of the boys. A large proportion of them, say *seven-eighths* at least, were employed in *sewing leather*, or *sewing coarse garments*, for a paltry hire of 15 cents per day. This will do when there is nothing else that can be done. But why coop up the boys in this manner, when there is so much to be done upon the farm, where they are anxious to be employed?—Such confinement enervates their bodies, and humiliates their minds. It would not be strange at all under such circumstances, that they should be refractory. No one could blame them for being so.

The purpose of the founder, if I rightly apprehend it, was *to prevent*, rather than *to punish offences*. A truly noble purpose. This he would accomplish, by taking those youth who were so unfortunate as to be under no parental guidance or restraint, and placing them *during their minority*, where they could be employed and instructed; so that when they come upon the world, they might be found useful and worthy of confidence. To do this effectually, it is necessary that the boys who enter the institution should feel it to be a *privilege* granted them, rather than a *punishment inflicted*; and so it is, the indiscretions of youths of their age are not to be viewed as crimes. The character of their acts is far different from those of old offenders.

The boys should feel a confidence in being entirely forgiven. They should not be harassed by the reflection, that they had done wrong. So long as they feel themselves to be looked upon as criminals, so long criminal thoughts will be uppermost in their minds. The boy who remarked in your hearing, "Some of us cannot help thinking," told the whole story. While they thus meditate, their chief aim will be to counteract the restraints of their overseers. Until they can be made to respect themselves, they will never be worthy to be respected by others.

To suppose these boys more disposed to evil, than the generality of boys of their age, in the community, is a great mistake. The fact is, boys, like men, are pretty much alike every where—only made different by accidental circumstances. I doubt not as much *talent* and as much *virtue*, can be found in a hundred of these boys, as in a hundred of the same age in any of our Colleges. Then why not so preserve and guide them, as to make men of them? If the State fails to do this it will fail to do its duty.

June 11, 1853.

ESSEX.

For the New England Farmer.

TRIMMING PINE TREES.

MR. BROWN:—Will you please to put into your valuable paper a few lines respecting whether it is best or not to trim young pine trees, and when is the best time to do it to prevent them from bleeding.

G. F. W.

REMARKS.—We cannot answer the questions of our friend with much confidence that we can afford him aid. The remark has been familiar to us from boyhood, that evergreen trees *must not be trimmed*; that nature will cast off the lower limbs, when the tree has done using them, in a better manner than we can separate them with the saw or knife. On the other hand, we have known individual

trees that were trimmed and flourished well, and we have in our mind at this time, a large number of white pine trees standing in a body that were pruned seven years ago, and which have grown well since. They stood thick, and were pruned up perhaps six feet from the ground.

If pruned at all, we have no knowledge at *what time* the work should be done.

The inquiries are important, and we hope those possessing knowledge in relation to them will impart it to us.

For the New England Farmer.

A NEW ENEMY IN THE FIELD.

Within the past three days, we have noticed on our apple trees, a small worm, which threatens destruction to our most valuable crop. His *manner* and *size* are much after the style of the canker worm, but his *personal appearance* is different.—Like the canker worm, he devours the leaf, all but the tough fibres, and if you suddenly shake the tree, spins down on his thread like a spider, and he leaves the tree looking as if seared by fire.

The canker worm, if I recollect aright, when he visited New Hampshire twenty years ago, or more, was always of a *dark color*, and moved soberly, by *measure*, like an inch worm, while these creatures are of all colors, black, brown, green and striped, and they slip off your hand, with a sort of *waltzing* step, in a second.

I have traveled from Chester, through Raymond and other towns, home, to-day, and have observed them all along. They are abundant, not only on the apple tree, but on the plum, and on the white and red oak. The peach, which promises a great crop, this season, seems to be free from them.—Probably they are not fond of prussic acid. I note the matter hastily for the *Farmer*, without investigation, myself. Probably Professor Harris can tell us all about the animal in a moment.

H. F. FRENCH.

Exeter, N. H., June 20, 1853.

REMARKS.—These new plagues are common in this vicinity, and threaten sad havoc to the apple trees! but they infest our strawberry beds and even the pines in the woods. Every effort should be made to suppress them and their progress minutely watched, so that we may know more of their habits. Shaking the trees pretty freely, dislodges them, but whether they return to the tree harmless, or not, we have not observed. We advise this practice and also the syringing the young tree well with whale oil soap, strong soap suds, or even clear water.

We understand that the *muriate of lime* manufactured by JAMES GOULD, at Charlestown, Mass., will destroy them, by sprinkling the ground with the lime, and shaking the worms down upon it.

TO KEEP BIRDS FROM PICKING FRUIT.—As the season is coming on for the depredations of birds, I beg to report my experience of last year, when I saved my currants and gooseberries by winding colored worsted around and across my bushes; and

my cherries by hanging up several pieces of tin with strong thread in the different trees, two pieces being hung near enough together to clash with the wind, which sound, with the bright reflection of the tin in the sun, certainly frightened them away; and I had my due share of fruit, which, the preceding year, I was obliged to relinquish to them.—*Agricultural Gaz.*

For the New England Farmer.

ORCHARDS—MUCK—ASHES.

I have an orchard which I think needs lime.—There is a pile of swamp mud near it which was hauled there last fall. I purpose after haying, to mix lime with the mud and apply it to the orchard next spring. Can I do better? (a.) Had the lime better be slacked before mixing with the mud or not?

I have several coal hearths on my farm, where coal was burnt about 20 years ago. Would it be profitable to put around apple trees; if not, is it of more value than swamp mud for any use? (b.)

COLL, in the American Fruit Book, gives the analysis of the ash of the Apple Tree, potash, soda, lime, &c. He says, supply potash in wood ashes, soda in common salt, and so on. If there is soda, lime, and other inorganic matters in wood ashes, will they not supply them as well as potash? (c.) Of course the ashes of different kinds of wood will supply them in different proportions.

There are different opinions as to what killed the fruit trees winter before last. Trees grew very late in the fall, and the latter part of October there was a cold snap which I think was the principal cause. I took up some tender trees the beginning of November, and covered them so that they were nearly below the action of the frost; others of the same lot I let stand through the winter; both kinds were badly killed; I think there was not much difference. A SUBSCRIBER.

REMARKS.—(a.) You will certainly do well to mix your muck with quick lime, and let it slake in the heap. We think of no way at present, in which you could do better with the materials.—Overhaul the heap as often as you can afford to before using, and if you spread it on the surface in the autumn the frost will act upon a much larger portion of it, and better prepare it for being plowed in.

(b.) Charcoal may be applied with advantage, in the powdered state, as a top-dressing. Whenever an increased supply of ammonia, escaping from the air, the earth, or from any putrescent matter, is desirable to be caught and retained, charcoal will always do good. The fresh burnt article, also—contains much saline matter that will be dissolved by rain, and contribute to the enrichment of the soil.

(c.) Wood ashes are better than potash to be used on most of our soils; and even leached ashes are capital fertilizers. They impart as much potash, soda, sodium, chlorine, &c., as the plants need, and they would take up no more in a given time if the quantity present were ten times as great. That is, we believe that plants have an

elective power, both as to quantity and quality, as well as animals, and therefore, it is under a due and proper admixture of all the elements of fertility, that the plant flourishes best. Leached ashes, therefore may be just as valuable for the crop as unleached, but its permanent effects might not be the same.

We must be on our guard against the idea that the application of a single element will always increase the crop. It undoubtedly will in some cases, but until the science of chemistry in its relation to agriculture are carried to a much higher degree of perfection than it now is, we must apply most of the principal fertilizers to our soils, to feel any certainty of reaping a remunerative crop. Dr. DANA aptly illustrates this point. He says that attempting to work the soil without *all* the ingredients of plants present in sufficient abundance is like a man attempting to build a vessel thus: he may have all the plank, and ship knees, and spars, and sails, and rigging, and all other requisite materials, but *no nails and spikes!* and he can't possibly build his ship successfully. Nails and spikes are small matters, compared with the rest of the vessel, but he can't get along without them.

ORDER IN EVERYTHING.

A PROPOSED EXPERIMENT.

There has been no saying oftener repeated, and none more worthy of repetition, so far as farm economy is concerned, than "A place for everything, and everything in its place." One of the best modes for every farmer to apply this rule in practice, is to make a complete list of all his farm implements, from his wagons, carts and plows, down to awls, gimblets, and screw-drivers. Let every implement be immediately returned to its place after using, no matter how inconvenient this may be, instead of throwing it on the ground till forgotten, with the intention of replacing it when a suitable moment occurs to do so. Now, if any one is unprepared to adopt this plan, we would recommend the following experiment, in order to reduce its merits to the test of accurate figuring:—Let him keep an accurate record of all the time lost in one year by hunting for lost tools in times of emergency, adding in the losses occasioned by keeping other persons or teams in waiting while the search is in progress also adding the waste occasioned by the consequent exposure of such tools to the weather, or by finally losing them,—and not forgetting to estimate the detriment to his crops and farming operations generally, by the delay thus frequently occasioned. (He may, likewise, if he chooses, keep an account current of the amount of vexation caused by these frequent annoyances—unless he is so far gone that disorder and delay are matters of indifference to him.) We have no doubt that such an experiment as this, faithfully followed out, would greatly surprise him at the end of the year, and furnish satisfactory proof of the immense superiority of the plan first proposed by us. Who will be willing to give *both* ways a full trial?—*Albany Cultivator.*

For the New England Farmer.

PROTECTION AGAINST THE BEE-MOTH.

MR. EDITOR:—You are aware that the great obstacle to the successful and profitable culture of the Honey-Bee consists in the depredations of the Bee-moth. Owing to these depredations many cultivators of bees have lost their entire stock and abandoned the enterprise. The great desideratum for many years has been to provide a remedy. The ill success of others in this respect has led me to be slow in announcing to the public what I have long believed to be an effectual safe-guard against the evil complained of. The remedy consists in a proper construction of the hive; and I have to announce to you, (and through you to the public,) that I have constructed a hive which has proved itself to be a complete protection against the encroachments of the Bee-moth. In its use for the space of 12 years I have not lost a swarm of bees nor had one in the least injured in this way; and I am now ready to warrant to others the same protection. Those who wish to avail themselves of such protection can examine my somewhat extensive stock of bees at my residence, or may address me by mail.

HENRY EDDY, M. D.

North Bridgewater, May 19, 1853.

REMARKS.—The above article is strictly an advertisement, but we are too good natured this morning to reject it as a communication, hoping that by extending the information we shall be the means of sweetening many a mouth that "waters," every time the word *honey* is mentioned.

EXTRACTS AND REPLIES.

C. S. HAMILTON, *Hartford, Vi.*, says, "I have protected my melons, squashes and cucumbers from the ravages of the bugs and worms with boxes made about one foot square, covered with mosquito netting, while my neighbors have been much troubled with them. The worms move on the top of the ground, and do not get under the boxes, and the plants grow much better.

To T. S. F., *Canaan Vi.*—Stable manure is not improved by being kept over one year, but is very liable to be injured, if not ruined, by being heated too much. It would be difficult to keep it, under any circumstances, so that it would not lose much of its fertilizing power.

If you can haul out a large bed of muck and lay it say 12 to 18 inches thick in some out of the way place, and there let it remain a year or more before using it, you will be less likely to bring meadow grass into your high grounds. During the time it is lying in the heap, plow it occasionally.

After it is a year old cart and spread it, in the autumn, on the land where you intend to plow it in.

Large quantities of muck may also be advantageously used by mixing it daily, or two or three times a week, with the droppings from the cattle

stalls. This takes up and holds the liquids and prevents evaporation, in a considerable degree, of the gases.

"E. S.," in reply to the inquiries of S. G. B., "about fence posts being thrown by the frost, says, 'dig the holes large and fill them with stones or charcoal dust. In setting post and rail fence, fill the holes only two-thirds full of earth. This will prevent the posts rotting for several years longer than though the holes were full.'" He adds—"The best time to kill alder bushes is in the old of the moon in August. If they are small, cut them down with a bush scythe; if large, use a common narrow axe, with a crooked helve, about three feet long, for then they can be cut without stooping over; cut them close to the surface of the ground, and if they spring up again the second year, they can be cut down with a grass scythe. In this manner I have been successful in killing many of these bushes."

KYANIZING TIMBER.

FRIEND BROWN:—I have of late heard much of the durability and increased value of timber that has been *Kyanized*, for fence-posts, shingles, &c.

Will you or some one who understands the *modus operandi*, please inform me "and the rest of mankind" how to *Kyanize* wood, and much oblige.

Yours, truly, A. D. HAGER.

Proctorsville, Vi., May 9, 1853

REMARKS.—The process of *Kyanizing* lumber is now abandoned, it having been ascertained that it does not accomplish the desired end,—that is, the preservation of lumber from decay. It consisted in soaking the materials, whether wood, hemp, rope, or other *vegetable* articles, in a solution of corrosive sublimate. It was held that a change took place in the *gluten* of the vegetable analogous to that effected by the tannic acid upon the gelatine of skins in the process of tanning. It is now believed by those who have made use of the process that it is of little or no value. The term is derived from the name of the inventor, *Kyan*.

MAY FLOWER APPLES.

MR. BROWN:—I leave a package containing a few of my *May Flower Apples*, which I wish you to taste. You thought I was rather too favorably impressed with them, "as most men were apt to be with an apple kind enough to spring up on their own land." I think their equal is not found, considering their bearing, late keeping, and table qualities combined. The barrel from which these were taken, were put up in a common manner the last of September, and without especial care rolled into my cellar, which is none of the best for apples, and opened the 25th of May. Less than a peck were rotted or specked. The tree is a good bearer. Its eating qualities please test, and especially *bake* half what I left you, and see how near you coincide with me that they are number one.

RICHARD C. STONE.

REMARKS.—Well, sir, so far as the eating quali-

ties are concerned, the May Flower Apples are all you give them credit for, if they did come up unbidden on your land. Some of the apples were baked and tested at our social board, and the only regret seemed to be, that you did not send a barrel, instead of "the package." They are deserving of extensive cultivation, and the introducer of them, of the thanks of all the apple-eating people.

Ladies' Department.

DOMESTIC RECIPES.

INDIAN MEAL DOUGH NUTS.—A tea-cup and a half of boiling milk, poured on two tea-cups of sifted Indian meal. When it is cool add two tea-cups of wheat flour, one tea-cup of butter, one and a half of sugar, one of yeast, and two eggs with a table spoonful of cinnamon or a grated nutmeg. If not sufficiently stiff, add equal portions of wheat and Indian meal. Let it rise till very light. Roll it about half an inch thick, and cut it into small diamond shaped cakes, and boil them in lard.

INDIAN MEAL SHORT CAKES.—Stir into a pint of sweet milk, three well beaten eggs, add a little salt, and half a cup of butter, with enough sifted Indian meal to make a thick batter. Drop it from a large spoon, upon buttered tins. Bake them in a quick oven—when they are lightly browned they are done. Send them to table hot, and eat them with butter.

INDIAN MEAL WAFFLER.—Boil two cups of hominy very soft, add an equal quantity of sifted Indian meal, a table spoon full of salt, half a tea-cup of butter, and three eggs, with milk sufficient to make a thin batter. Beat all well together, and bake in waffle irons. When eggs cannot be procured, yeast is a good substitute. Put a spoonful in the batter, and let it stand an hour to rise.

TO BOIL HAM.—Wash the ham in cold water two or three times, and put in a kettle of hot (not boiling) water to cover it; let it boil gently, according to its weight, (fifteen minutes to each pound); it must be kept slowly boiling all the time; keep the pot covered except to take off the scum as it rises; if it is like to boil over, take the lid partly off.

Putting meat down to boil in cold water draws out its juices. Hard or fast boiling makes it tough and hard.

When it is done, take off the skin, trim off the under side neatly, and put spots of pepper and stick cloves at regular intervals over the whole upper surface. Or dredge it well with wheat flour or rolled crackers, and brown it in a hot oven or before a hot fire. Serve hot with the gravy from it, and boiled vegetables; or it may be served cold. Trim the bone with parsley or the delicate leaves of celery, and put sprigs of the same around it on the dish; lemon sliced and dipped in flour, or batter and fried, may be laid over the ham and on the dish. Mashed potatoes, stewed apple, or cranberry, dressed celery, or boiled spinach, or cauliflower and mashed turnips, are served hot with ham.

With cold ham serve pickles or dressed celery, or both, and bread and butter sandwich.

Boy's Department.

THE SULKY BOY.

This is a species of ill-temper with which you are all familiar. We see persons afflicted with it, almost every day—and a sad affliction it is, too, both to themselves and to their neighbors. There is Robert—for instance—a good boy, in many respects, but once in a while he has a desperate fit of the sulks, which nearly if not quite balances the credit side of his character, and leaves him with more demerits than merits. So long as he can have his own way, every thing goes on pleasantly, but let his father interfere with some plan he has formed, or set him about some job he does not like, and you will soon find out what his temper is. For hours after, perhaps for a day or two, he is surly, morose and gloomy. He says but little, but when he speaks, he snaps and growls like an angry wolf. He pouts, scowls and looks sour at every body, friends as well as foes; and should you attempt to reason kindly with him on his folly he grows more obstinately sullen than ever. Do you ask what good all this does? I do not know. There certainly can be no pleasure in thus punishing one's self; on the contrary, he greatly aggravates his disappointment. A cheerful, sprightly temper makes its possessor happy; but a sulky one can only render its owner wretched. The lad I have described indulges only occasionally in these fits; but there is danger that this sullen state of mind will after a while become permanent with him, if he does not soon break himself of the habit. He is gradually souring his disposition, and the habit is growing upon him. It will be well if he does not turn out in the end a mere Nabal—the churl whose character is described in 1 Sam. 25.—*Boy's Own Guide.*

Advertising Department.

A limited number of advertisements of an appropriate character will be inserted in the monthly Farmer at the following

RATES.

For one square of 16 lines, one insertion.....\$1.00
For each subsequent insertion.....50

The above rates will be charged for all advertisements whether longer or shorter.

English Fancy Lop-ear Rabbits.

THE undersigned will be happy to show a choice lot of imported Lop-eared Rabbits, to gentlemen interested, at his residence in Melrose. This stock is from the best in England, and was selected with care. I have a few young Rabbits for sale, which will be ready to deliver in July and August.
Address, GEO. F. BURNHAM, Box 19, Post office.
Boston, June 11, 1868. 4m*3

Wanted,

An Ayrshire Bull, (full blood) from 1 to 3 years old. Apply immediately at this office.
May 21, 1868. 12*



Auction Sale of 4000 Acres of Land.

ON TUESDAY, the 18th day of JULY next, the subscriber will offer for sale at public auction, several choice and valuable farms in the vicinity of Lockport, in the county of Niagara, and State of New York; among them some of the best improved and most highly cultivated farms in this region of country. Also,

2000 Acres of Choice Timbered Land,

lying about eight miles east of Lockport, and five miles from the Erie canal and the Rochester, Lockport and Niagara Falls Railroad. The timber is principally Beech, Maple, Bass, Ash, Hickory and Oak. In the midst of this tract has been erected

A First Class Steam Saw Mill,

with a variety of valuable machinery, capable of manufacturing 30,000 feet of lumber every 24 hours, all in fine condition and active operation. The mill and the improvements connected therewith, have been erected within the past two years at a cash cost of over \$20,000. The mill will also be offered for sale.

This tract is surrounded by a highly improved farming country, is watered by various streams which meander through it, and is well situated for subdivision. The soil is of the first quality. These lands have never before been offered for sale. No higher commendation of the property offered is needed, than to say it lies in the midst of the most fertile and flourishing portion of Western N. York. The proximity of the railroad,

The Local Demand for Cord Wood

and other lumber, render the timber upon this tract of very considerable value. This land will be sold in lots of 50 acres and upwards, as purchasers may desire. The quantity, condition, quality and value of the property offered, constitute inducements to purchase, rarely presented to the public, whether capitalists or agriculturists.

The titles are beyond question, and the sales will be absolute.

A liberal credit will be given to those desiring it, for a principal part of the purchase money. The whole quantity of land that will be offered for sale will be over 4000 acres. An examination of these lands is invited before the day of sale. Lists and descriptions will be furnished to those desiring the same.

The sale will commence at 1 o'clock P. M., upon the 2000 acre tract, and will continue until all the lands shall be sold.

A. WOLCOTT.
7w*

Lockport, May 28, 1853.

The subscriber begs leave to refer the public to—Hon. Nathan Dayton Hon. J. L. Woods, Hon. Hiram Gardner, Lyman A. Spaulding, Esq., Lockport; Hon. Levi A. Ward, Rochester; Gen. R. Harmon, Wheatland, Monroe county; L. C. Fitch, Esq., West Bloomfield, Ontario county; A. A. Boyce, Esq., Utica.

Super-Phosphate of Lime,

IN bags and barrels, made by C. B. DeBURG, a warranted pure and genuine article, with full directions for use. For sale by GEO. DAVENPORT, 5 Commercial, corner of Chatham St., Boston, agent for the manufacturer.

Also, for sale, Ground Bone, Bone Dust, Burnt Bone, Guano, and Grass Seeds of reliable quality.

March 26, 1853.

tf

Haycock Covers.

FOR SALE, Haycock Covers made of the leaves of Bamboo, water tight. These mats are very useful to the farmer in getting in his hay crop during showery weather, and will annually save more than their cost in the quality of the hay.

For sale by RUGGLES, NOURSE, MASON & CO.
Boston, June 25, 1853.

Talacre Scythe Stones.

300 DOZEN TALACRE SCYTHE STONES for sale very low by T. B. BROWNE, 7 Doane St.
Boston, June 25, 1853.

3w

Garden Seeds.

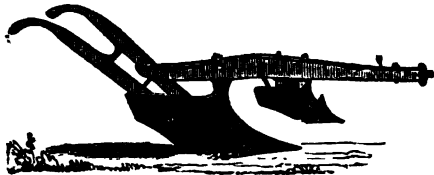
WE respectfully solicit the attention of purchasers of GARDEN SEEDS to our extensive stock, which we offer for sale. We have all the sorts of Vegetable Seeds that have proved worthy of cultivation; also, Grain, Grass and Flower Seeds. All the varieties are raised and selected expressly for our trade, and we do with confidence recommend them to all who desire to procure seeds that will prove true to their names.

Catalogues gratis, on application.

RUGGLES, NOURSE, MASON & CO.,
Jan. 1. Over Quincy Market, Boston.

THE BOSTON AND WORCESTER

EAGLE DOUBLE PLOWS.



THE superior merits of these Plows, consist in,

1. The mode of attaching the forward mould-board to the beam, by which great strength and durability are secured, as also the various desirable changes in depth of work, and relative depth of each plow, the same being regulated to any shade of nicety, with perfect facility.

2. The entire and handsome overturning of the sod furrow, by the forward mould-board, to the extent of the whole width of furrow taken by the plow, placing it beneath, out of the way of the teeth of the harrow, cultivator, or other implement, so that it is in no case dragged to the surface in the after-cultivation of the crop.

3. The thorough and finished work done by the rear mould-board, in taking up its furrow of under soil and sifting or scattering it over the inverted sod, so as to entirely fill to the surface, and at the same time break open any undue cohesion of the soil, leaving the plowed land in a finely pulverized condition, requiring little labor with the harrow or other surface-working instrument,—and indeed, in all tolerably free loams, rendering the use of these instruments, as pulverizers, quite unnecessary.

4. The remarkably light draught of the plow, in proportion to the amount of work and the thoroughness of pulverization accomplished.

Sever. 1 sizes of the BOSTON & WORCESTER EAGLE DOUBLE PLOW, are made by the subscribers, from patterns of their own original invention. They invite their friends and customers to examine these Plows, as to quality and durability of material, thoroughness and finish of construction, and to test their working properties.

Manufactory at Worcester, and Warehouse Quincy Hall, over the Market, Boston.

RUGGLES, NOURSE, MASON & CO.

April 30, 1853.

Farm in Westboro', Mass.,



For sale or exchange, for Boston property, situated on the old Grafton road, within 1/2 mile of the Railroad Depot, containing 37 acres of as good land as any other 37 acres laying in one body, in the town; it is elevated about 75 feet above the railroad, and overlooks the town, and is within 7 minutes walk of three churches and the town house, which for healthy location is unsurpassed. The buildings consist of a modern house, built by Boston mechanics in 1851, and is 32 by 23 feet, with a kitchen attached, 16 by 23 feet, two stories high, with a cellar under the whole. Wood-house, 16 by 20 feet; work-shop 16 by 12 feet; carriage and hen house, 16 by 21 feet; poultry yard, 30 by 53 feet, enclosed by slat fence 8 feet high; barn, 60 by 36 feet, with cellar under the same, so divided as to give a vegetable cellar containing about 2000 bushels; cistern and well water is brought into the house, and all the wash of the kitchen and privy is conducted by a drain to the barn cellar; likewise a farm house 24 feet square, 1 1/2 stories high, cellar under the same; there are three good wells of water and one good brick and cement cistern on the premises. There are now on the farm 142 large apple trees, mostly grafted, also 250 young thriving apple trees, mostly Baldwin, from 4 to 6 years from the bud, some of them have borne fruit; likewise 24 peach trees of early choice variety, 10 pear trees, &c. There has been taken from the farm this past year, 30 tons of hay, 375 bushels of corn in the ear, 700 bushels of carrots, beets and S. turnips, 80 barrels grafted fruit, besides vegetables used in the family. For further information, apply at this office, of Messrs. SIMON BROWN or WILLIAM SIMONDS, at Westboro', of Messrs. FAYER-WETHER & GRIGGS.

Feb. 5, 1853.

tf

Suffolk Pigs.



The undersigned can supply a few orders for choice Suffolk Pigs of the best blood in the country. Also, a few Breeding Sows and 2 Boars. Address, post-paid, LUTHER GILBERT, Newton, Lower Falls.

June 11, 1853.

tf

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LANGSTROTH'S

Movable Comb Hive,

(Patented Oct. 5th, 1852.)

EACH comb is built on a movable frame, and in five minutes they may all be taken out, without cutting them or curing the bees. Weak stocks may be helped to honey and brood from stronger ones; queenless colonies supplied; the worms caught; and new colonies formed in less time than is usually required to hive a natural swarm. That the safe and easy control of the combs, makes a complete revolution in bee-keeping, the subscriber prefers to prove rather than assert. At his Apiary, combs, honey and bees will be taken from the hives, the queen exhibited, and new colonies formed. By the close of May his work (350 pages) on the Honey-Bee will be published. It contains many new and highly important discoveries, and gives full directions for managing bees, in the author's hive, or any other. Cost of hives from one to five dollars; farm rights five dollars. For one dollar, postage paid, the book will be sent free by mail. On receipt of eleven dollars, a beautiful hive showing all the combs, (with glass on four sides,) will be sent with book and right, freight paid, to any Railroad station in New England; a right, book and hive for two colonies, with glass on each side, for \$13; a thoroughly made hive for two colonies, glass on the bank only, with book and right, for \$11. Address,

L. L. LANGSTROTH, Greenfield, Mass.

May 14, 1853.

8w*3

Bound Volumes.

BACK VOLUMES of the NEW ENGLAND FARMER, elegantly bound in Muslin, Gilt and Embossed, are now for sale at this office.

NEW ENGLAND FARMER

Is published on the first of every month, by JOHN RAYNOLDS and JOEL NOURSE, at Quincy Hall, South Market St., Boston.

SIMON BROWN, Editor.

FREDERICK HOLBROOK, } Associate
HENRY F. FRENCH, } Editors.

☐ Terms, \$1.00 per annum in advance.

☐ All subscriptions to commence with the volume, Jan. 1. The FARMER, is devoted *exclusively* to Agriculture, Horticulture, and their kindred Arts and Sciences; making a neat volume of 576 octavo pages, embellished with numerous engravings. It may be elegantly bound in muslin, embossed and gilt, at 25 cts. a volume, if left at the office of publication.

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NEW ENGLAND FARMER, (WEEKLY,)

An Independent Agricultural Family Newspaper.

The News and Miscellaneous departments under the charge of WILLIAM SIMONDS, will include a full and careful report of the news of the Markets, and the news of the week, such as Domestic, Foreign and Marine Intelligence, Congressional and Legislative proceedings, Temperance and Religious Intelligence, and a general variety of Literary and Miscellaneous matter, adapted to family reading, comprising more useful and valuable reading matter than any other Agricultural Newspaper published in New England. Everything of a hurtful or even doubtful tendency will be carefully excluded from its columns.

☐ Terms \$2.00 per annum in advance.

The monthly contains nearly the same matter as the Agricultural department of the weekly.

☐ Postmasters and others, who will forward four new subscribers on the above-named terms, for either publication, shall receive a fifth copy gratis for one year.

☐ All orders and letters should be addressed, *post-paid*,

RAYNOLDS & NOURSE,

QUINCY HALL, SOUTH MARKET STREET, BOSTON.

☐ POSTAGE.—The postage on the New England Farmer monthly, is 14 cents per quarter, or 6 cents per year, to any part of the United States, to be paid in advance at the office where the same is received.

Haying Tools.

1000 dozen superior Grass Scythes.

PHILLIPS, Messer & Colby's—Darling's—Farwell's—Mansfield & Lamb's—Keyes & Dunn's.

Also, Lawn, Grain and Bush Scythes, of the best quality.

1000 dozen Scythe Sneaths.

Patent Grass Lawn and Bush Sneaths, from the best manufacturers in the country.

2500 dozen Hay Rakes.

Hall's, Simonds's, Carpenter's, Page & Wakefield's, Robinson's, Duggan's and English best Hand Rakes.

500 Drag Rakes.

This Rake is a hybrid between the Hand and Horse Rake every good farmer should have one or more.

3000 dozen Scythe Rifles.

Clark's celebrated Whetstone Grit and Emery Rifles. Also, Austin's, Anson's, Willard's, and others.

200 gross Scythe Stones.

Quinebaug, Chocolate, Norway Rag and Indian Pond; also, Woodward and Talacre (English) Scythe Stones.

20 tons Grindstones.

A well selected assortment of the celebrated Blue Sheet, warranted. Also, Grindstones of all sizes, mounted on frames and rollers complete.

Grindstone Fixtures, viz: Flanges, Arbors, Cranks and Rollers.

800 Horse Hay Rakes.

Delano's Patent Revolving and Spring Tooth Hay Rakes; all of which will be sold at wholesale or retail, at very low prices, by RUGGLES, NOURSE, MASON & CO., Over the Market, Boston.

June 25, 1853.

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. V.

BOSTON, AUGUST, 1853.

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SIMON BROWN, Editor.

**FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS**

AUGUST.

"There's music in the dawning morn',
Ere the lark his plume dries—
'Tis the rush of the breeze through the dewy corn—
Through the garden's perfumed dyes."

Men breathe freely again; the burden of the *Hay and Grain* harvest is over. The weather has been propitious, and the bays and scaffolds swell with the rich treasures of the newly shorn fields.

"August," says a beautiful writer, "is that debatable ground of the year, which is situated exactly upon the confines of summer and autumn; and it is difficult to say which has the better claim to it. It is dressed in half the flowers of the one, and half the fruits of the other; and it has a sky and temperature—all its own, and which vie in beauty with those of the spring."

The whole face of Nature has undergone, since last month, an obvious change. The dark green of the corn-fields now beautifully contrasts with the brown stems of the grass roots, while the stubble of the early harvest is only left of the recent waving fields of golden grain.

The trees and shrubs and fields are still green, "but not the fresh and tender green of the spring, nor the full and satisfying green of the summer; but many greens, that blend all those belonging to the seasons first named, with others more grave and more bright, and the charming variety and interchange of which are peculiar to this delightful month, and are more beautiful in their general effect than those of either of the preceding periods; just as a truly beautiful woman is perhaps more beautiful at the period immediately before that at which her charms begin to wane, than she ever was before."

The season grows old in animated life, too. New voices disturb the hot and listless noon, or swell on the evening air. The birds have paired, nested, and reared their young, and now in "sober russet clad," gather in garrulous joy, or sport in airy circles about the old trees of the farmer's home.

In England, this month, *their great harvest sea-*

son, is one of gladness. *Here*, we rush on to see how large a crop we can raise and gather in without any outward expressions of gratitude and delight. But *there*, Leigh Hunt says, our ancestors used to burst into an enthusiasm of joy at the end of harvest. They crowned the wheat sheaves with flowers, they sung, they shouted, they danced, they invited each other, or met to feast, as at Christmas, in the halls of rich houses.

We like these outward expressions of joy; they are sympathetic, and touch the whole nation's heart. Our great harvest, the *INDIAN CORN HARVEST*, is followed by our annual festival, *THANKSGIVING*, in which nearly all our people participate. But, as with the English people, we should like some ceremonies in the fields, some crowning of the sheaves, some relaxation from stern labor, and joyous gatherings of the young and old to commemorate the harvest scenes. We copy the customs of our ancestors in many things—we should be glad if our people would do so in some of their Harvest Scenes.

CALENDAR FOR AUGUST.

Within our recollection, and within our own practice, but under the direction of others, haying was not concluded until the first week in September; the last week in August or the first in the following month being thought early enough for cutting the meadows. The period usually occupied now, in this important part of husbandry, does not occupy one-half the time that it did forty or fifty years since. Many farmers who cut fifty to a hundred tons of hay in a season, accomplish it within the space of ten to twenty days, and get it in better condition than it used to be when two months were occupied.

This is one of the important improvements in farming, which has been effected by labor-saving implements, and by a better knowledge of the nature of, and better modes of preserving, the nutritious qualities of the grasses.

Meadows, this year, when hay will be somewhat scarce and high, should be cut early in August, if they have been omitted until that time. If cut when the grass is tender and succulent, most of it will be consumed by the stock if fed in the morning during the coldest weather. Indeed, we have often found milch cows preferring one or two fodderings of meadow hay in the day, to that of the best English. They like variety, and will thrive better for an occasional feed of inferior hay. It also answers a good purpose, cut, and mixed with better hay or straw, and Indian or oil meal. It is all worth saving in good condition this year.

THE TURNIP CROP.—This crop, in its varieties, is always important, but particularly so when the hay crop is short. It will be well to sow the flat turnip as late as the first week in August; the expense of seeding is small, so that if the crop fails, the loss is trifling; if the season proves favorable, a fine crop may be obtained and the winter's supply of fodder greatly enhanced.

Attention must be given to the ruta bagas and mangel wurtzels. All weeds should be taken out and the plants thinned so as to give each ample room to expand itself into a good size and shape. The distance required will depend much on the richness of the soil. If that be in good condition twelve inches between the plants will be none too much. The crop will be benefited by hoeing in good super-phosphate of lime or dissolved bones. Do not neglect the turnip crop.

RECLAIMING MEADOWS.—Every observing cultivator must have come to the conclusion that the best lands of New England lie in our low grounds, or even the boggy swamps which are scattered all over it. When once subdued, no lands yield such ample returns for the expense incurred, or remain in good condition so long without being again broken up. It is scarcely necessary to repeat what we have so often said on this subject, but refer the unpracticed to an article in another column on "Swamps and Draining," and to the last year's volume, under "Farm Work for September."

August, also, is a good time, perhaps the best, for breaking up and laying down old grass lands that have "run out." The process is simple—plow deep, manure well, turning it under two or three inches with the cultivator or harrow, and seed liberally. The manure used in such cases, should be fine, so as to mingle thoroughly with the soil. Twelve quarts of herds grass and three pecks of red-top seed, are sufficient for an acre. Sow six pounds of clover seed per acre, on a light snow in March.

GRAPE VINES.—Everybody likes grapes. There is scarcely a person who has a garden but adorns it with a grape vine. Great efforts are being made to introduce varieties that are delicious and hardy; by-and-by, we shall succeed. The old idea, long

entertained, that the leaves must be stripped off in order that the fruit might ripen, has nearly lived out its day. It only lingers, like a heavy brick, in the noddles of some of the "old fogies," who are determined that the world shall be no wiser than they themselves are. As well may we strip the apple tree of its leaves that the sun may enter and ripen the fruit, or tear off a man's arms and legs, that his head may sooner be ripe with wisdom! No, no—let the leaves alone; they kindly prepare rich juices for the fruit, as the bird prepares food for her young. Nature is accommodating in some things; the tree does not object to send its unelaborated sap into the veins of scions not her own, and comfort and protect them, but she will not be turned from her propensities in other things. She cannot be robbed of her lungs or leaves, and produce good blood or fruit.

GRAINS.—The grains which have cost you so much labor, which you have cut and garnered up, will still require care. If frequented by rats and mice, the loss is not only in what they consume, but in shelling it out and mixing it with their offal. By thrashing and clearing up early you will find a more favorable return from your acres.

CELERY.—This is a wholesome winter salad; easily raised and always brings a fair price in market. It ought to be common among all classes. The earthing up about the plants must be carefully attended to this month. Gather up the leaves neatly and not bury the hearts of the plants.

Beans and the early kinds of cucumbers may be planted for pickles, if done immediately; herbs, such as are desired, must be saved now; the sage cut and dried, and hops picked and dried.

BUDDING.—The season has again approached when this operation may best be performed. The process is so familiar to most persons, that we will only refer the uninitiated to our former remarks on the subject.

HAUL OUT MUCK.—Now that the swamps are mostly dry, and the haying is out of the way, the opportunity should be improved to go into the muck mines and remove large quantities to the high lands. Spread it shallow on pasture, or on grass lands which are to be plowed, so that the winter frosts may penetrate the whole heap and thus prepare it for use.

A shovel full of meadow muck, and a half gill of guano in a hill for corn, will give about thirty bushels to the acre on almost any land that is not utterly impoverished.

A Noble Act Rewarded.—Rev. Rufus W. Griswold has presented to Mr. Linus Benedict, of Norwalk, (who saved the life of his daughter, at the Norwalk calamity, after she was supposed to be drowned,) a very costly gold watch and appendages, as an evidence of his gratitude and that of his family, for his extraordinary and successful efforts on that occasion.

For the New England Farmer.

COMPOSTING.

BY H. F. FRENCH.

"I should like to have you tell me what is the advantage of hauling a great lot of common soil into a barn cellar, and then hauling it out again, into the field? Why is not it just as well to plow in the green manure and let it mix in the ground?"

This question, proposed by a working man, desirous of a rational reply, suggested to me the idea of saying something on the subject of Composting.

By supplying our yards and cellars with common soil in proper quantities, we retain the liquid portion of the manure, which must otherwise be mostly lost, and we prevent the evaporation of the volatile elements which exist in all manure. In the case of stable manure we also prevent loss by heating, and fire-fanging. Now it does not require a vast addition of soil, to effect all these objects, and as carting this material is very expensive, true economy tells us to reflect upon the objects in view, and stop when we have attained them.

If you can carry out at ten loads, the same elements of fertility that you have heretofore carried out at twenty, you have gained, by saving it, three or four dollars worth of labor, which, in the spring of the year, is worth minding. Quantity is not always value. More than eighty pounds of every hundred of barn-yard manure, hauled into the field, are nothing more nor less than water, just such as the clouds will give us in abundance, about planting time. Let the farmer keep this in mind as one guiding principle, that manure is valuable, not for its bulk or weight, but for its fertilizing properties, which make but a small part of either.

Again, we frequently see farmers in a bright, windy April day, expending much labor in composting in their fields, shoveling over and over again, their manure heaps, often mixing nothing with them, and oftener perhaps, road-side sand or worthless soil. We will speak of the gain presently. The loss by the operation is manifest to more senses than one. It was stated in a public lecture by a learned chemist, that about one-fifth of the value of a heap of stable manure would escape by evaporation in such a day as I have named, by a single shoveling over and shaking up in the usual way.

Let the farmer bear in mind, as another guiding principle, that one of the most valuable constituents of the manure heap—*ammonia*, is also one of the most volatile. It has little more than half the weight of common air. It is the same compound that is used by the ladies, as *smelling salts*, and the same which often, almost suffocates you, as it does also your horse, in the stall at your stable. Whenever your sense of *smelling* gives warning, then you may know, that the air is carrying off your manure heap, though invisibly, often as rapidly as an Irishman could do it, with a wheelbarrow.

For hoed crops, the old way of plowing in the manure as it comes from the yard is often, the true economy. Nothing is then lost by evaporation, and no labor is expended in repeatedly handling it over.

But for gardens, for top-dressing for grass and for harrowing-in, for any purpose, coarse manure cannot well be used. Spread upon the surface,

its whole value is almost lost, and the harrow will not cover it. It must be composted for convenience and economy. This is best done in the barn cellar, and if done elsewhere, a still moist day should be chosen for the work.

Thus far, I have spoken only of composting with common earth. Few farms are so poor as not to afford something better. If the compost is for sandy land, *clay-loam* or clay pulverized by frost, may often be used to advantage. It is desirable to save *ammonia*, which, as has been said, is a very hard creature to keep. A good cork is necessary to confine it in a bottle. Now it happens, that *clay* has the power to attract and retain *ammonia* greater than any other kind of soil, so that a double advantage may be gained in some cases by its use, even in large quantities. To pine sandy lands, I have applied twenty cart loads of clay to the acre, at once, with advantage. Composting it with stable manure renders it less compact and more friable.

On the other hand, upon a *clayey* soil sand is of great use, especially when applied to the surface in laying it to grass. And to black swamp meadows, sand is frequently indispensable to the growth of a crop of grass. For such uses, then, it may be the very best economy, to use in compost, large quantities of sandy loam or even of pure sand, if nothing better offers.

A half inch of sand, upon a bog or clay meadow, will do much towards preventing the *heaving* by frost, which often ruins our newly sprouted grass.

Clay and sand are, however, but mere amendments of the soil, operating for the most part mechanically, the *clay* rendering *sandy* soil more compact and retentive of water and manure, the *sand* rendering *clay* soil more open, and permeable to the air, and the roots of plants. In addition to this, as has been already hinted, sand supplies to bog meadows a substance known by the name of *silex*, not usually found in such soil, which enters largely into the formation of the stalks of all plants, appearing as pure flint, on the stalks of rye and other grain.

There exists, however, within reach of almost every farmer, another class of materials of vastly greater value than any that have been named, in the form of *swamp mud* and *peat*. These deposits differ very widely, some having very little value, and others having almost precisely the same constituent elements as barn manure. Usually they contain the same elements which constitute barn and stable manure, except *ammonia*. This *ammonia*, we have seen, exists in cow and horse-manure in larger quantities than they can alone retain. By using them in our barn cellars, or compost heaps, swamp mud or peat, we actually add to the mass most of the valuable constituents of manure, and at the same time retain the volatile part, which would otherwise escape, and which alone is needed to make the muck itself a valuable fertilizer. Very few deposits of swamp mud have been found, which have not proved valuable when composted with barn or stable manure. Occasionally, a deposit is found which is valuable, applied to the land directly from the bed whence it is dug. Usually an exposure of one or two years to the action of frost and the atmosphere, or the application of caustic lime or of lime slaked with a solution of salt, will neutralize the acids which exist in most swamps.

A careful attention to the reason of things, a constant endeavor to understand as far as may be the principles of vegetation, and the operation of various fertilizers upon the different crops and soils, will lead to more useful results than any general rules of practice that can be given. H. R.

Exeter, N. H., 1853.

For the New England Farmer.

MONTHLY FARMER FOR JULY.

July! Who can think of July, and forget Independence? Not the boys, if they can get crackers. Nor the men, if they contrast their situation with that of their European brethren. The world probably needed just such a specimen of old-fashioned despotism. Liberty of the press, of speech, of thought, of locomotion,—will now be better understood. But this is not reviewing the *Farmer*, with its almost interminable contents. Orators and writers when they wished to round off a period with an idea of the vastness of our field, used to say, sometimes, "from Maine to Florida." The correspondents of the *Farmer*, in the Provinces of the North, in the Sandwich Islands, and along the Pacific coast, open to us a field so much more extensive, as almost to provoke a smile at this expression.

THE FIRST TWELVE PAGES

Contain articles from

The Editor.	Prairie Farmer.
S. P. Fowler, Danversport.	O. V. Hills, Leominster.
The Editor.	Hewitt.
R. B. H., Baltimore.	The Editor.
Culturist and Gazette.	P.
J. N. M., Georgetown.	A. S. R., Lincoln.
M. A. Perry, Watertown.	J. S. Greene, Sandwich Islands.
S. G. B.	Peter Fay, Southboro'.
The Editor.	Richard C. Stone, Southboro'.

In the salutatory "Calendar" the editor, as he loves to do, blends the sentimental and the practical. Believing that even farmers have heads as well as hands,—hearts as well as stomachs, he would point out the beauties as well as suggest the hard labors of this "fervid noon" of the year. The fifth number of the "Birds of New England" describes particularly the Meadow Lark, the Golden Robin, the Red-winged Blackbird, and the eccentric Cow Blackbird. Remarks on "Ridging and Draining," with directions for the work, "when necessary," are succeeded by a very interesting article on "Strawberries near Baltimore." Some sensible comments on "The Turnip Crop," which somehow appears to be a much greater favorite with "book-farmers" than with the practical ones of my acquaintance. Short articles, giving a remedy for the "Potato Rot;" how to "Preserve Manures;" suggestions on "Watering the Garden," with cuts of implements; directions for raising "Buckwheat;" some good "Summer and Autumn Apples" recommended; observations on "German Agriculture," that reminds us that we have lessons yet to learn in economy, especially of manures; and valuable and minute directions for building cisterns, more interesting to those who have a "great fuss" every washing day to haul soft water, than to those who, like "our folks," have a never-failing well of clear, soft, cold water;—bring us to an agricultural communication from the Sandwich Islands, written, not by some stray sailor, or transient visitor, but by one who raised 400 bushels of wheat on his farm there, last year. The weevil, the cut worm, and other injurious ver-

min, afflict the Hawaiian as well as the New England farmer; but worse than all, says Mr. Greene, is the fact that farming is in low repute—the people naturally indolent, prefer any means of subsistence to honest toil. An article on "Plows," and one on "the Variety of Borers," complete our first lesson.

THE SECOND TWELVE PAGES

Contain articles from

The Editor.	S. E. Hooker, Poultney, Vt.
Stock Register.	T. A. S., Westboro'.
Silas Brown, Wilmington.	J. E., Concord.
A. Todd, Smithfield, R. I.	The Editor.
The Editor.	Wool Grower, Cheshire Co.
J. R., Concord.	The Editor.
W. D. B., Concord.	Farm Journal.
The Editor.	S. F., Winchester.
Olive Branch.	Philadelphia Paper.
A. Todd, Smithville, R. I.	St. Vincent Mirror.

"A Day with the Great Plow" tells us of plowing furrows 12 inches deep, and 18 wide! Statistics on the difference between the "Live and Dead Weight of Cattle," is followed by some strictures on a criticism of "Experimental Farming." Following which are valuable articles on "Plaster, Ashes, &c.;" "Action of the Atmosphere on the roots of Plants;" description of the new "State Pauper Farm," in Tewksbury; explanation of the "Circulation of Sap;" remarks on "Orchards," and a "Chapter for nice old Farmers." The "body" that undertakes to tell Fanny why country folks live in the rear of the house, will please inform me why it is that city people live in the cellar, while they have so many stories above ground. Then we find a protest against "Cruelty to Animals;" Mr. Hooker's successful method of "Grafting Old Trees;" and comments on "Diversity in Theory and Practice." In my observation among practical farmers I have never been much troubled by the "chaos of theory and practice," which the writer of this article so feelingly deprecates. Is there greater uniformity in the prosecution of any other business? Indeed, are not we old farmers charged with following traditions—of doing, generation after generation, as our fathers did? "The true mode of Cultivation" is the caption of an article on State Pauper Farms, in which the writer suggests that they may be so managed as to "be patterns to all the surrounding country." The result of the "Visit to the State Reform School" farm—given on the next page—does not seem to me to afford much ground for these sanguine hopes. Have Town Poor-farms often proved models, either as to crops or profit? But it is well that public attention is turned to these State institutions—they cannot be watched too closely, lest they prove hot-beds of abuse and mismanagement, instead of "models." But we must proceed to a defence of "Lunar and Stellar Influence;" comments on the late "Mt. Airy Agricultural Institute," in which the writer attempts to show that all similar schools are antagonistic to the New England system of free schools; a sarcastic account of a clover-seed speculation; and a notice of a kind of earth found in St. Vincent, more valuable for manure than guano.

THE THIRD TWELVE PAGES

Contain articles from

The Editor.	C. D. Stuart.
M., Chester, N. H.	Granite Farmer.
The Editor.	Maine Farmer.
M. Perry, Watertown.	A. Reader, Winchester.
The Editor.	The Country Gentleman.
Pittsfield Culturist.	H. F. French, Exeter, N. H.
The Editor.	Horticulturist.

This division commences with a fine picture of the "Yellow Siberian Crab." "Charcoal" recommended as a fertilizer. Is not this tantalizing to nine-tenths of the farmers in New England, who would not know where to find charcoal enough to smut their faces with? "Composting"—a recipe for an acre, including "twenty bushels of lime," is followed by a scientific kind of article on "Manures," in which the writer says "the mixing of caustic lime with dung is a most baneful practice." A valuable dissertation on the "Food of Plants," is followed by some explanations of the action of the U. S. Agricultural Society on a paper by Prof. Booth on Analysis of Soils, that places the matter in a more favorable aspect, than did the report published in the *Farmer*. Account of a trial of plows in Ipswich, with a notice of a new "Horse Hoe;" Poetical origin of Flowers; a lesson that taught one man to be careful of horses, and suggests the query, are not men often injured in the same way—violent exercise with a full stomach. A description of the "Onion Worm," with accounts of diverse failures of remedies. Review of the "*Monthly Farmer* for May." An article on "Soiling" is followed by one showing an investment in weeds, however large the dividends may be, is a poor one for farmers. "Flat vs Hill Culture" discussed, and we then have another of those playful letters from the New Hampshire associate editor. Does your "short cut" to a hay crop pay? After the trees or stumps are dug out by the roots, your process would cost me, here, over \$70 per acre to prepare the land for seeding. This division closes with a notice of a splendid book on North American trees, costing \$45. Such works ought to be purchased by town libraries, instead of expending all their funds on cheaper and more accessible books.

THE LAST TWELVE PAGES Contain articles from

J. H. R., Dorchester.	Essex.
Wisconsin Farmer.	G. F. W.
Genesee Farmer.	Agricultural Gazette.
—, May 31, 1853.	H. F. French.
F. Holbrook, Brattleboro', Vt.	A Subscriber.
Granite Farmer.	Albany Cultivator.
Scientific American.	Henry Eddy, M. D.
Geo. P. Burnham.	Editor and Correspondents.
J. R., Concord.	Richard C. Stone.

The foremost article of our last division rejoices in the caption "Witch Grass—State Chemist"—the first part of which gives directions for exterminating this pest of our fields by plowing; while the last part of the article seems to indicate a belief that there is somewhere in the "upper regions" a vast quantity of agricultural knowledge bottled up, and that a State chemist, an agricultural college, or something of the sort, is necessary to draw the corks, and let a refreshing stream flow in upon the parched minds of farmers. In the next article, "Education of Oxen," the writer says "No man can be a good teamster, who is not a gentleman." Something in that. "Hints on thinning Fruit"—quite unnecessary in this section, where the curculio, &c., save us all trouble in this line. An experiment in feeding cut corn-stalks; "Influence of Horticultural Societies," and "The Climate of Countries," carry us over to a cut of "Fancy Lop-eared Rabbits"—funny looking things they are! We now have another chapter on the State Pauper Farm, and one on the State Reform School. The writer of the latter article says, "I doubt not as much talent and as much virtue can be found

in a hundred of these boys, as in a hundred of the same age in any of our colleges." And these boys, as I understand it, are the legal skimming of our whole State. Collect a hundred of the most vicious horses in the State, and will "Essex" call it a "great mistake to suppose them more disposed to evil" than an equal number that should be selected for their docility? Notice of "A New Enemy in the Field;" "Orchards—Muck—Ashes;" "Order in Everything;" an instructive page of "Extracts and Replies," with articles in the Ladies' and Boys' Departments, conclude our review of the *Monthly Farmer* for June. A READER.
Winchester, June, 1853.

THE MILK-MAID AND THE BANKER.

A milk-maid with a very pretty face,
Who lived at Acton,
Had a black cow, the ugliest in the place,
A crooked-backed one,
A beast as dangerous, too, as she was frightful,
Vicious and spiteful,
And so confirmed a truant, that she bounded
Over the hedges daily, and got pounded.
'Twas all in vain to tie her with a tether,
For then both cord and cow eloped together.

Armed with an oaken bough (what folly!
It should have been of birch, or thorn, or holly,)
Patty one day was driving home the beast,
Which had, as usual, slipped its anchor,
When on the road she met a captain banker,
Who stopped to give her eyes a feast
By gazing on her features, crimsoned high
By a long cow-chase in July.

"Are you from Acton, pretty lass?" he cried;
"Yes," with a courtesy, she replied.
"Why then you know the laundress, Sally Wench?"
"She is my cousin, sir, and next door neighbor."
"That's lucky, I've a message for the wench,
Which needs despatch, and you may save my labor.
Give her this kiss, my dear, and say I sent it,
But mind, you owe me one,—I've only lent it."

"She shall know," cried the girl, as she brandish'd her bough,
"Of the loving intentions you bore me;
But as to the kiss, as there's haste, you'll allow
That you'd better run forward, and give it my cow,
For she, at the rate she is scampering now,
Will reach Acton some minutes before me."

For the New England Farmer.

HILLING PLANTS.

MR. EDITOR:—In your last No. I notice an article from the *Genesee Farmer*, entitled "Corn, Flat vs. Hill Culture." Most of the ideas I like well. If nature had designed more earth around the corn stalk, would she not have made it grow deeper in the ground? I guess she would have done so,—and if nature has made the proper part of the corn plant grow out of the ground of itself, why may we not suppose that she has properly arranged the potato and all other plants? If she has made them right, then all our hilling is wrong—if she has made a mistake in one case what reason have we for knowing that anything is made right?

I find that if I hill up trees it kills them, instead of helping them to stand up strong.
Won't Mr. *Genesee Farmer* tell us how he knows that Providence made a mistake in letting suckers grow on the corn plant; he, of course, would not destroy them if he did not think so. I was brought

up to think that "He (Providence) "doeth all things well." If he does, let us look at his works and not endeavor to improve them, except so far as we can by making everything tend to supply natural wants.

ONE WHO HAS MUCH TO LEARN.

New Haven, Conn., July, 1853.

SWAMPS—DRAINING.

There is no month of the year more favorable for draining and reclaiming swamps than August. VON THAER, author of the *Principles of Agriculture*, in that section of his work devoted to a consideration of the system of draining, says:—

"A proper degree of draining tends to protect crops from injuries which are the result of excess of moisture, and contributes materially to ensure their success. This operation alone, has often been sufficient to render extensive sterile plains exceedingly fertile."

There are probably few farms of any extent, on which drains are not more or less necessary.—Swamps and bogs exist in most sections, and these can never be profitably worked, or rendered of any essential benefit to their possessors till they have been thoroughly ameliorated by opening channels for the passage of all the superabundant water they contain. Draining, in this case, must necessarily precede all other improvements, and if it be not thoroughly and systematically accomplished, the operator will find all his subsequent efforts of no avail.

As an instance of successful and economical draining, we may mention the case of the Rev. D. Huntington, from whose communication to the committee of the Hampshire and Hampden Agricultural Society, we gather the following facts:—

"A few years since," says Mr. H., "this land was a swamp covered with bogs, and brakes and bushes—the haunt of snakes and frogs and mud-turtles—an entire waste." It was not only useless, but being located in the immediate vicinity of his homestead, was a constant eyesore, an probably unhealthy. In reclaiming it, he first cut the bushes, and then opened a ditch three feet wide, and two and a half feet deep, extending through its whole length. The bog heads were then cut, taking off the entire surface where it was thought to be necessary, and removed to an adjacent lot, the soil of which was sandy. Here they were made to act as manure, and being intimately mixed with it, they soon so far improved its capacities, as fully to recompense him for the cost and trouble involved in their removal.

The greater part of this soil has had crops upon it, and some parts repeatedly, and the whole, at the time the report was presented to the committee, was fit for the plow. What the expense was, Mr. H. expressed himself unable to state, but was confident it bore no proportion to the im-

proved value of the land. The cutting the bushes, opening the ditch and removing the "bog-heads," could not involve a very heavy outlay, as the work was performed at "odd jobs," and when, probably his help had little else to do. The *Northampton Courier*, in speaking of this subject, says:—

"As to intrinsic value, lands thus redeemed are to be ranked with the very best. For some crops, broom-corn and beans for instance, other soils are preferable. But for the standard, substantial crops of Indian corn, potatoes, oats and the different kinds of grasses raised in our valley, experience will show abundantly, that we have no better lands than those thus reclaimed. Having nothing in view but to subdue and improve them as well as possible, he has never been particular to ascertain precisely the quantity of crops raised. Compared with those raised on the alluvial lands adjoining, however, they will in the proper season of crops, speak for themselves and the soil that produces them. In some respects the soil of reclaimed lands has manifestly the advantage. It is naturally richer. Having for its basis clay or hard pan, it retains the manure put upon it much longer. It is as easily cultivated, and excepting those portions of the alluvial which are benefited by freshets, it is, to say the least, as easily kept in good heart."

Covered ditches are now used to a considerable extent, and answer all the purposes of draining admirably, while they may be plowed over and cultivated as are other parts of the land, so that there is no loss of surface and no disfigurement of the fair face of the field.

These drains are constructed of various materials. They will last many years made of brush laid lengthwise in the ditch; but if a gullet is made at the bottom 6 inches square by stoning, and the ditch filled with small stones to within 12 inches of the top of the ground, it will make a ditch that will last a lifetime.

Brush drains may answer the desired purpose, where stones cannot be obtained; yet we question whether it would be best to lay down such works, where permanent drains are required. A field drained with good and permanent covered drains, presents a neat appearance; there are no ridges or gutters, but the entire surface is level and unbroken. A cheap and convenient article may now be had in *draining tile*, which possesses a permanent efficiency and value. It is made of various sizes, with and without bottoms, and some of it perforated on the sides so as to receive the water at whatever point it may flow in upon them.

We have a covered drain across a twelve acre lot, diagonally, made of stones, with a six inch gullet, which has supplied us with *twelve hundred gallons of pure water* every 24 hours through all the late drought. On the ground thus drained, we have just cut, by the estimation of good judges, a crop of herds grass, red top and clover, equal to three tons to the acre, where two years ago about

one ton of meadow grass, skunk cabbage, hard-hack and hassock grass grow !

Where stones are plentiful on the farm, they are the material we ought to use in underdraining. If stones cannot be had, draining tile, which can now be obtained at most of our Agricultural warehouses, are far more preferable than wood, and will be found more efficient, as well as more profitable, in the end.

For the New England Farmer.

"INDIGENOUS FRUITS AND SHRUBS"— IMPROVING FRUIT.

MR. EDITOR:—I noticed in your last week's paper that one of your correspondents wants "information on the rearing of our indigenous fruit trees and shrubs." I have no doubt that a great deal might be done in the way of improving our native fruits; but is there any necessity of going back to the crab apple, when we have got so many *fine, and perfectly hardy varieties of the apple*? To effect any great change in the character of a fruit is the work of a long lifetime; but this should not deter us, if there is need of it. Van Mons did a great deal towards improving pears; he found that the fifth generation were nearly all of good quality. He selected the seed from some young, healthy seedling tree, and planted; the fruit of most of the first generation proved of inferior quality, but he selected seed from the best, and planted again and so on. Now this would be the way in which your friend might improve the crab spoken of, (*Pyrus coronaria*), so perhaps with the choke cherry, (*Cerasus Virginiana*), though we think it would be a waste of time, for the same may be said of cherries that was said of apples; there are so many and good varieties that it would seem hardly profitable to go over the same or nearly the same ground that has already been traversed. It probably would not take so long to improve the cherry as the pear or apple. Do not understand me to say, nor do I think that there is no room for improvement in the fruits I have spoken of; I think there is, though many say we have arrived at perfection in some of the fruits, such as strawberries, raspberries, &c. Allowing that there is nothing to be done towards improving some of the fruits, still there is a broad field open before us. We want some good varieties of the gooseberry, those that will flourish in almost any location and yet be free from mildew which so much troubles the English sorts; we have none now that can be depended upon except Houghton's Seedling, and that is quite small compared with the foreign kinds. And then we want some better, and earlier, hardy grape, and whoever succeeds in obtaining just the thing, will, if he chooses, make a handsome sum out of it. I have spent considerable time in this way, and have now a good many seedlings of different fruits, some of which are very promising; I have tried pears, apples, cherries, plums, peaches, grapes, raspberries, gooseberries and others. We shall meet with disappointment, but never mind if we fail once, try again, keep trying.

Your friend speaks of the whortleberry, and says he has been unsuccessful in producing them from the seed; I have never tried them, but think there is no trouble in doing it; the seed should as soon as washed from the pulp, be put into moist loam,

or sown, and if the latter is done, they will probably come up early the next spring; if the former, they should be kept through the winter somewhat moist, and planted as soon as the ground will answer; they may not come up the first year; it takes two years for some seeds to vegetate, among which is the mountain ash, but they come well the *second* year.

I think something might be done towards improving the whortleberry, and some other native fruits which have been hitherto neglected. I have not done the subject justice, for want of time, but shall refer to it again. J. F. C. H.

Newton Centre, July 9th.

THE DROUGHT.

It was said by one of old that men would not leave certain habits and practices, even though one from the dead should warn them of their errors. We suppose there are those living at this enlightened day, whose practices in agriculture could not be changed by any amount of evidence, ocular or oracular, that could be adduced. But we ask every man to observe now, for himself, whether, in nearly all lands that have been deeply plowed and highly cultivated, there has not been a heavy crop of grass, or grain, and there is not promise of good crops of corn, potatoes and vegetables. We have been close observers, and certainly such is the case throughout the range of our observation.

Is there any better evidence needed, then, that the true way to manage our land is, to cultivate only so much as we can plow, manure and tend in the most thorough manner, and giving each crop such attention as it requires at any moment?

There has been but one season within our recollection where a fair return could not be had on lands cultivated in this manner. Indeed, there is no surer return for the money and labor invested in any business, than there is to the farmer on such lands as these.

A too great expansion of business with the farmer operates in its results precisely as it does with the mechanic or merchant. A man may remove several ton's weight in a day, and deposit it safely at the desired point; but if he undertakes it at once, he sinks beneath its weight and is buried in the ruins.

For the New England Farmer.

IMPORTANCE OF THE LEAF TO THE PLANT.

MR. EDITOR:—Seeing you have appreciated the few extracts that I sent and given them a place in your excellent journal so well suited to the wants of the present day, I think it is the duty of every man at all conversant with the elementary principles of agricultural science to contribute whatever mite of information he has got for the good of his fellow-man. I consider that the man who can make two blades of grass grow where only one grew formerly, is a greater patriot to his country than the blood-stained hero. With these few remarks, I beg leave to give you a few more

straws from the gleanings of the field of practical science.

Such as the wonderful journeys of a particle of carbon. We are too apt to overlook the wonders of things with which we are every day familiar, and which are close to us, but after a little more minute attention and examination, we begin to find out a great many extraordinary powers in objects with which we seemed already familiarly acquainted.

Not the least of these, is the air we breathe. It is certainly one of the most extraordinary substances we are acquainted with, especially that portion of it, the oxygen, that active agent on which depends our very existence, and by which so many substances, by its chemical combination, are produced. I will confine myself to one of the products of the universal agent, the oxygen, by its chemical combination with carbon; one of the simple elements.

Let us look round upon the bright green robe in which the fields and trees are dressed; look round with wonder, for each leaf you see is a part of the Almighty chemist's laboratory, and here, amidst all this beauty, there is going on from early morn to dewy eve, a work of such importance that if it were discontinued, the whole animal creation would soon cease to exist. Here, in these little laboratories, is applied a mighty force, to which the most powerful galvanic battery cannot be compared, and here is a change effected, which establishments of human power, backed by human ingenuity, has hitherto been unable to accomplish, a change so utterly beyond man's power is effected. Let us look round with joy that so much beauty shrouds the work-shop of the mighty chemist; look round with thankfulness, that so great provision is made for our security and comfort, and while we walk amongst these green leaves, look with reverence, for the hand that works therein, is the Creator's.

Let us now examine this mighty laboratory, this little leaf. Plants are not so much nourished by their roots as many persons suppose; the leaves and the soft green covering of the stem perform a much more important part in supplying the plant with food. Plants grow by the absorption of water and the fixation of carbon; of these substances plants are almost entirely composed, and unless they are supplied, the plant will die. The leaves are the principal agents in the absorption and decomposition of carbonic acid, and the retention of carbon, as a very simple experiment will prove. Take a sprig of any succulent plant and keep it in a dark place till you use it. Fill a tumbler three parts full with water, and with a clean tobacco pipe breathe into it for some minutes; then fill up the glass carefully, without wetting the edges; then drop in the sprig. (The glass should be full, so as to make the water stand above the edges.) A flat piece of paper having been laid on the top and a flat plate above, then turned upside down, and put in the sunshine—you will see globules form upon the leaves of the sprig and rise to the upper end of the inside of the glass; this is pure oxygen gas. The carbonic acid which the water absorbed has undergone decomposition and the oxygen set free.

The nutritious fluids of the plant, like the blood of animals, need exposure to the air before they are fit to take a place in the organism of the

plant, or form its tissue, and thus contact with the air is brought about in the leaf, the anatomy of which, in some instances, may be seen without a magnifying glass. If you split a stem down carefully at the point where a leaf is attached, you may be able to detect the stalk of the leaf in connection with the central pith or medulla. A leaf is composed of four layers of tissue, or two layers folded upon themselves. The skin or cuticle of the leaf is composed of compressed or condensed cellular tissue; beneath it, run the vessels which bring the sap up from the root, which coming from the medulla or pith, flows first over the upper surface of the leaf, and then having been turned under towards the stem, deposit new wood within the bark. All the juices of plants are the same till they pass along these vessels in the leaf where they undergo a change. After having been exposed to light and air in the myriads of vessels which run along the leaf, the juice passing downwards on the outside of the stem, deposits woody fibre in its downward course. This is chiefly composed of the carbon which has been taken from the air in the state of carbonic acid by the leaves, which have really much more to do with the nourishment of plants than the roots.

In illustration of this, a bough of a tree round which a plant of woodbine has been tightly bound, will be swelled above the woodbine, not below, proving that the growth of the tree takes place from above, downwards. It may also be proved by a simple experiment with a cord bound tightly round the stem of some rapidly growing tree. It will be found in a short time, the fibres sent down from the leaves will swell the stem above the ligature, while the portion of the stem below, will not have increased in size; never, therefore, should the leaves of plants be taken off, with the idea that they have got more than the roots can nourish, for, on the contrary, the leaves are the support of the plant, where there is a free admission of air. The beautiful green color of leaves depends upon the absorption and decomposition of carbonic acid in their vessels, and what we are breathing out of our lungs to-day, may probably be incorporated with the tissues of a beautiful plant to-morrow; perhaps with some blade of grass; on that grass the cow will feed and again appropriate the carbon by absorbing it into her circulation and forming the butter of milk; and of that butter, whose chief component part was breathed out from the lungs a week before, we may eat, digest, and again breathe out into the atmosphere. The adaptation of such a variety of important changes, so different in their characters and the ends to be fulfilled in such a manner as all to be brought about by one universal agent, and the supplying of this agent to all bodies which require it, by giving it the gaseous form and making it encircle the earth on all sides, may be regarded as one of the most striking instances which can be adduced, of that harmony of adjustment which pervades the works of nature. Yours, &c., M. A. PERRY.

Watertown, July 1, 1853.

THE SWALLOW.—Will some of our friends in different parts of New England, be kind enough to note the time of departure of the swallows, and let us know.

For the New England Farmer.

ROSE BUGS.

This pest of our gardens is, as usual, making his attacks directly upon the blossoms of our grape vines. Truly "destruction wasteth at noon-day." The following contrivance may be found useful. Take a common tunnel; insert a handle from two to three feet long into the spout; then, having a slender pointed stick of the same length in your right hand, hold the mouth of the tunnel under the cluster of blossoms upon which the bugs have lit; "stir them up" with your short stick and they will drop into the tunnel. Its steep smooth sides prevent their getting up again. They become entangled with each other, and at convenient intervals you can turn them into a basin of water. The thing is worth trying.

UNION IS STRENGTH.

Mr. Editor—I am a decided convert to the doctrine that farmers, and especially fruit-growers, may accomplish a great deal if they will only unite in a general warfare against their common enemy, the "insects injurious to vegetation." For nearly ten years, I had in my gardens, plum trees of the choicest varieties, but I never was blest with a single ripe specimen of the fruit. Within the last three years I have had specimens upon all my trees; and, I am ashamed to confess, not through any plans or efforts of my own. I think I am reaping the results of the labors of others. All around me I see my neighbors using various means to "destroy the bugs." Cotton around the plum trees, and no doubt other contrivances less visible, must have done something to thin out the destroyers. Let me quote a line or two from Dr. Harris's recent work on "Insects injurious to Vegetation: "Eighty-six of the spoilers (rose-bugs) were known to infest a single rose bud, and were crushed with one grasp of the hand. Suppose, as was probably the case, that one half of them were females, by this destruction eight hundred eggs at least were prevented from becoming matured."

Three days ago my grape vines were almost covered with rose bugs. Twelve hours would have sufficed for the destruction of every cluster of blossoms. By using the instrument described above, (which is far more convenient than a basin of water hot or cold) I have cleared my vines almost entirely. The number of victims is growing less and less and my grapes look finely. "Union is strength." Let each fruit grower guard his own post, and the victory is ours.

Pepperell.

REMARKS.—Capital advice—hops it will not be in vain. "Unite" with us again, friend B.

THE WHEEL HOB.—One of the most accurate observers of men and things, and one of the most intelligent of our correspondents, in speaking of this implement, says:—"I think a man will complete three times the work with one of these machines, in the same time, that he can with any other I have seen. They not only thoroughly cut up the weeds but they leave the surface in fine condition for the growth of the plant."

APPLICATION OF WIND AS A POWER FOR RAISING WATER.

To pump from a well the requisite supplies of water, was a work of no small labor. It led to the investigation of a method of working a pump by means of the wind. The practicability of the plan I am about to suggest, does not remain to be tested by experiment. During former years, a small wind-mill was in successful operation upon the farm of Mr. ANDERSON, five miles west of Ashland, Ohio, on the road leading to Mansfield. It worked a pump that amply furnished a large stock of cattle, which otherwise could obtain no water. Two days only did it cease to perform its duties during more than two years, and that interruption was occasioned by the meddling of mischievous boys. It is still in operation for aught I know. The cost of this simple machine, including pump, did not exceed fifteen dollars.



By reference to Plate, the principles upon which it was constructed will be at once comprehended. The direct application of the power, without the intervention of any gearing or machinery, obviates much friction, hence a small amount only of power is required. The diameter of the wheel should not exceed four feet, a few inches less is preferable. It is firmly fixed by its hub on an iron axle formed of a square inch bar. The sails or buckets are secured at their outer ends to a wooden rim, like that of a large spinning wheel. An inch and a half crank is raised on the axle at C, which, at that point, is cylindrical, and upon which is adjusted the upper ends of the piston rod of the pump B. This, when in motion, of course commands a play of three inches.

The Body of the Mill.—A piece of pine plank, M, is suspended from the cross-girt of a frame, E, by an iron bolt, I, furnished at its lower end with a large head, and a washer, and secured by a key, at the upper end, admitting of an easy circular motion of M, around the bolt. This motion is coincident with that of a swivel on the piston-rod. The rudder, or vane, will necessarily throw the wheel at all times into the wind. The axle, A, is suspended from the body by two straps of iron, through which it passes at L, N, where it is cylindrical without regard to perspective and proportion, but will perhaps illustrate the subject sufficiently.

A breeze which merely agitates the leaves of the trees will set the machinery in operation. A reservoir of some six or eight hoghead was kept nearly filled, and when, in windy weather, a surplus of water was raised, it was returned to the well by a waste-pipe. In the hands of an ingenious mechanic it might, no doubt, be greatly improved. Iron, in some of its parts, might be substituted for wood.

A well, suitably located, will furnish water for an ordinary garden, and without labor, by aid of this mill. How much it would improve our flowers, fruits and esculent vegetables, cannot be estimated, but it would surely effect a revolution in our present modes of gardening here in the West, where we suffer much every season from drought. Public tanks, inns, tanneries, and thousands of prairie farms, require its aid.

In all this, gentle reader, there is no Quixotism. Its feasibility has been amply tested.

J. P. KIRTLAND.

Cleveland, Ohio.

In connexion with the above we copy the following appropriate remarks from the *Genesee Farmer*. There are farms all over New England where their proprietors have been pumping water by hand for large stocks of cattle for a hundred years, when the expenditure of a few dollars in some such contrivance as we have given above, would have furnished an ample supply.

AGRICULTURAL MECHANICS.

Mechanical science and arts are doing more for the advancement of agriculture in the United States than all other agencies combined, so far as immediate results are attained. Ultimately, chemistry, physiology, meteorology, geology, and other departments of the natural sciences, will confer benefits on all industrial pursuits far transcending any mere mechanical advantages. Indeed, the most valuable mechanical powers, even now, are more the fruits of an intellectual culture than of original genius; and the successful study of natural phenomena precedes nearly all important inventions and discoveries. Operations that have been practiced thousands of years, like those of plowing, weaving, grinding grain, and pumping or lifting water by wind, are seen from an entirely new point of view by the man of science; and he is able to suggest improvements that never could have occurred to a mind not illuminated by the numerous and brilliant lights kindled by modern researches into the laws of matter.

We have been led into this train of thought and remark by perusing in the *Horticulturist*, the val-

uable article on the "Application of Wind as a Power for Raising Water," from the pen of Prof. KIRTLAND, of Cleveland, to which the reader's attention is invited in this number. By keeping the wheel always in the direct current, if it had any force, the flanges would catch it, and turn the wheel, as a current water-wheel is turned. Such a wheel with the necessary shaft and crank may be made of iron for a few dollars; and every one can understand from the illustration furnished by Prof. KIRTLAND, that this simple apparatus will work successfully whenever the atmosphere has any active motion. These current wheels (they are in no sense mills) and pumps, if manufactured in a large way, might be sold at prices which would enable every farmer to have a score of them for irrigation, and for the distribution of liquified manure, if he saw fit to make the mechanical power of the winds create wealth for himself and mankind.

With durable and cheap machinery, vast quantities of water may be elevated to any desirable height on every farm, for agricultural purposes; and the thanks of the farming community are due to Prof. KIRTLAND for his very intelligible illustration of a simple and useful wheel and crank to be put in motion by wind. The water that falls upon every square foot of ground in a field is equal, on an average, in this country, to 200 lbs. a year; and so much of this as descends deep into the earth and reappears in wells and springs, always contains both the vegetable and mineral food of plants (dissolved out of the soil in passing through it) in greater or smaller quantities. In rare instances such water is poisoned by an excess of acids, or acid salts.—*Genesee Farmer*.

For the New England Farmer.

MUCK.

I like to see the farmer returning home from his day's toil, with his team loaded with muck or rich sod. It gives almost sure evidence of thrift. Yet there are some people who become muck-mad. They seem to hold the highway, as both private and public property, in a manner that I am unwilling to acknowledge their claim. The highway is public, so far as the unobstructed right of pass-way is concerned, and private, to the extent that one may set out fruit or shade trees, or plant potatoes against his premises, provided he does not encumber the public travel. These muck-mongers do not stop here. They go about plowing up the highway, and digging their pitfalls not only against their own farms, but their neighbors.

For the New England Farmer.

THE NEW INSECT.

MR. BROWN:—We are visited here by a multitude of canker worms, and they are destroying our fruit at a great rate; we think the trees will suffer for the want of leaves. The course I have taken to drive them away is to throw sand through the tops of the trees with a shovel, when they will come down like a shower. This should be done a number of times, and I think will prove beneficial. To prevent their going back, I have wound a piece of birch around the tree and covered it with a compound made of tar, lamp-oil and spirits of turpentine, and they will not pass over it.

York County, Me.

B. M.

For the New England Farmer.

NEW YORK STATE AGRICULTURAL COLLEGE.

MR. BROWN:—I have just received a pamphlet containing the Charter, Ordinances, &c., of the New York State Agricultural College, from which I learn that the Legislature of the State incorporated the Institution in April, 1853, and that an organization has been effected under the Act, by the choice of JOHN DELAFIELD, President; JOHN A. KING, Chairman of the Board of Trustees; JOEL W. BACON, Secretary of the Board; and N. B. KIDDER, Treasurer.

The Charter is quite brief, simply giving the common rights and privileges incident to corporations; prescribing that at least three hundred acres of land shall belong and be attached, to the College; that the plan of instruction shall embrace—practical and scientific agriculture, chemistry, mathematics and mechanics, surveying and engineering, geology and botany, the practical management of the farm, of the dairy, of the various kinds of live stock; also, such other branches of knowledge as may be deemed useful and proper. The capital stock is fixed by the corporation at sixty thousand dollars, divided in shares of fifty dollars each; and liberty is given to increase the stock from time to time, as the Trustees may judge advantageous and proper. The corporation is to become active for the primary purpose designed, when forty thousand dollars shall have been subscribed, and fifty per cent. on each share subscribed for shall have been paid in. The College is to be endowed and put in operation by private individual enterprise and liberality. The Trustees have accordingly adopted measures which will lay the subject before the farmers and others at once; and a private letter from the President informs me that they have already been encouraged by liberal unsolicited subscriptions to the stock.

The corporation declare their chief object to be, "to provide a system of instruction essential and practically useful to the agricultural interests of the State—at once combining theory with practice, affording wholesome discipline to the mind, an accumulation of knowledge, and promoting habits of labor and industry." To this end, a farm of not less than three hundred acres of varied soil is to be connected with the college, and to be managed with a view to the results of a mixed husbandry. The college year is to be divided into two sessions. The first session, commencing the first of April, and ending the first of October, is to be mainly occupied in the conduct of the field operations, interspersed with instruction relative thereto, thus affording the students a practical knowledge of the various departments of the farm. The second session, commencing the first of November, and ending the first of March, is to be principally devoted to study and attendance upon courses of lectures, particularly and elaborately illustrating the various subjects and sciences bearing upon agricultural pursuits. The plan for lectures marked out by the officers, is very full and complete, leaving no subject of direct importance to the farmer untouched. The course of instruction for each student is to continue for three consecutive years, at the expiration of which, and upon the recommendation of the Presi-

dent and Professors, the Trustees will confer diplomas.

Each candidate for admission into the College, must be able to read and write the English language well and have a good knowledge of the ground rules of arithmetic—must be at least sixteen years of age, and give evidence of good moral character.

For the present, the charge for instruction, with board and lodging, lights, fuel and washing, is fixed at three hundred dollars per annum, payable, one-half at the commencement of the first, and one-half at the commencement of the second session; but the Trustees intend to lessen the cost of instruction, and make the distribution of knowledge as free as possible, as fast as endowments or State patronage shall permit.

Judicious rules of discipline are adopted, the enforcement of which will be calculated to promote industrious and virtuous habits.

For one, I feel under great obligations to the enterprising agriculturists of New York, who, by their persevering labors, amid much contumely, have at length succeeded in giving life and tangible shape to an Agricultural Institution, now actually on the eve of commencing a practical, well-defined course of instruction, where the young farmer may gain information in principles of great importance to a proper and the most successful prosecution of farming affairs, may have his mind so expanded, refined and disciplined, as to render succeeding life more agreeable and desirable, because the avenues for pleasurable emotions have been greatly opened and increased.—more influential and beneficial, because the informed and disciplined mind is an engine of power and strength, always fit for valuable service as occasion may demand. I trust that this Institution will greatly flourish, and that other communities, observing its good fruits, will be influenced to the establishment of like advantages for the training of young men.

Believe me, my friend, we have had quite enough of speculation upon the possible and probable advantages of educating the young farmer; every needed argument has been stated, in every variety of form and connection; and now the great want is action, *practical action*. Public and desultory discussion can do but very little, if any more good; earnest individual effort must develop a system, and set it in active practical operation. Those of us here in New England, who believe it would not hurt our farming youth to be better educated, in our endeavors to provide the necessary facilities for their instruction, must not look too high for aid, or expect to bring it from afar; we must seek, and shall find it among our enterprising liberal private citizens. Legislative bodies will probably grant us the chartered right, and privileges incident to incorporated schools of learning, but further they will not, at present, aid us. Seldom leading in new and untried plans of improvement, they more generally reflect the views of that large or major portion of the public who are content with customs long practised, and fear or despise, rather than profoundly investigate and reason upon, those plans of action which lead out of, or beyond the beaten paths. An Institution for the instruction of young men in agricultural and rural affairs, would be quite an innovation upon old ways; and for a time at least, would doubtless be subject to much contempt and ridicule, from persons of

shallow ideas as to the amount of education which may desirably find employment in the conduct of such affairs. It therefore needs for its establishment and its practical working, a class of men, hopeful and courageous because they have clear, comprehensive and well defined views of what can be beneficially done in the way of agricultural education—men who, understanding the exact condition, difficulties and wants of New England farmers and farming, can devise, and select suitable agents to dispense, a course of instruction for our farming youth, justly combining theory and practice, and actually fitting them for the proper and most profitable cultivation of the earth, with the incidental, but vastly important advantage of preparing them, by the mental training attendant thereon, for a more intelligent and useful discharge of duties as republican citizens.

I know of no association of men more favorably circumstanced for giving life and an active practical usefulness to an Agricultural College, than your Massachusetts Board of Agriculture. It is composed of persons of large and long experience in practical affairs, of persons of ripe scholarship and thorough experience in the management of seminaries of learning, and all entertaining liberal views of men and things. You are located in a State containing many wealthy citizens, frequent in noble acts of munificence. One of your citizens, resident in Boston, told me not two years ago, that he would give the necessary land, located wherever in the State might be judged best, to a corporation duly chartered and organized for the education of young men for farming. What, if not the establishment of a justly proportioned Agricultural Institution, is a fit achievement for your Board? I venture, my friend, to express to you, a member of this Board, a hope, and indeed expectation, that it will not let its great energies and influence lie in dormancy, regarding this matter, or play, upon the surface of it by mere discussions, but will use them actively, practically, in the production of something which we can see, feel and possess. Allow me to ask if it would not be well to ascertain what can be done by way of private subscriptions to the capital stock, and of individual endowments of such an Institution. You can probably obtain a charter from the Legislature, and not much more at the outset. Aim not too high at the beginning, but make your course of instruction more and more full and complete, as experience and increasing funds shall dictate; and from first to last, make it such as shall be practically beneficial. The condition of most of us farmers, so far as the affairs of this life are concerned, is one requiring primarily, a practical fitness for the intelligent discharge of a round of daily, and more or less homely, but still manly, duties; and with this substantial ground-work well laid, we may well add thereto all the acquirements and accomplishments we can find time for—the more the better. It cannot need more than a few words to say, that these remarks are not made in a criticising, or fault-finding, meddlesome spirit, but spring from feelings of friendship and good will, and a desire for the promotion of agricultural improvement.

F. HOLBROOK.

Brattleboro', June 20, 1853.

WHITE WEED.—Capt. Daniel Trefethen of this town, assures us that he has discovered a method

for killing effectually, this plague of a "farmer's life." He says that the present season, he had a field, which was literally covered with the blossoms of the white weed so called, and having a small quantity of salt on hand, the thought suggested itself to him, that possibly some benefit might accrue to the field from the distribution of it upon the surface. The act was "father to the thought." He scattered the salt over the field, and in a short time the blossoms all withered, and upon examination the roots were found to be entirely lifeless. This is certainly a valuable remedy for the eradication of this detestable weed, providing the experiment prove as effectual in all cases, as in this. At all events, we would recommend to those farmers who are troubled with this species of weed—to try it.—*Dover Gazette.*

For the New England Farmer.

COWS AND TAR.

MR. EDITOR:—You are aware, perhaps, that many good cows are sometimes troubled with the *garget*, or they give curdled milk. Sometimes it injures the bag by preventing the drawing of the milk. The best remedy that I ever tried is to cut the hair out of the hollows just back of the horns, and fill with tar. It is simple, cheap and easy; try it, and if it is worth any thing let it be known; or if any one knows anything better, I hope he will publish it.

ICHABOD DAVIS.

East Barnard, Vt.

REMARKS.—Yes, sir, we are aware that a great many cows are troubled with what is called *garget*. The udder swells, is filled with bunches, becomes sore to the touch, and sometimes breaks and destroys the value of the cow for milking purposes. It is a very serious evil to the dairyman, as well as to the poor animals. No remedy has yet been found for it, hardly worthy the name, unless you have made the discovery.

This disease, and abortion, which has become very frequent, are the most serious difficulties with which the farmer has to contend with his cows. We really wish some person who has the leisure and ability would search out their causes and suggest a cure. Who will do so?

EFFECTS OF DEEP FLOWING.

The *Farmer and Mechanic*, published at Lewiston Falls, Maine, one of the liveliest and best papers we receive, says:—"A gentleman in Canton took us out the other day on to two acres of land which he had cultivated for a few years, and which he makes very productive. He told us that it was so wet when he commenced upon it that he could do but little with it; but some three or four years ago he put in a large plow, and turned it over to the depth of nearly one foot, following with the subsoil plow to the depth of nearly one foot more. Since then he has had no trouble with the wet or the drought. Every thing he puts upon it flourishes finely. This process will pay on much of our land, whether the undermining will or not."

For the New England Farmer.

A RARE AND PLEASANT BOOK.

MR. EDITOR:—I found, not long since, among some old books in this village, a treatise on Fruit Growing and Gardening, which interested me so much, that I could not deny myself the pleasure of sending a description of it to yourself.

It is an octavo in form, and divided into two sections. The title page to the first part has been torn out, but the title over Chapter 1, is "The Best, Svre and Readiest vay to make a Good Orchard and Garden." The date of course is gone with the title page, but that of the second part, which is probably the same, as the pages are continuous, is 1631. The title to this, "The Covenry Hovse Vife's Garden, containing rules for herbes and seeds of common use, with their times and seasons, when to set and sow them. Together with the Husbandry of Bees, published with secrets very necessary for every housewife. Also diuerse new Knots for Gardens. London. Printed by Nicholas Okes for Iohn Harrison, at the golden Vnicorne in Pater-noster Row, 1631."

It is not merely the antiquity of the book which pleases, though I must confess to the weakness, if weakness it be, of possessing a very tender regard for old things, among which old friends, old books, and old wine are especially valuable—but as I remarked, it is not merely this which makes the book valuable; but the writer (I wish we had his name) is *brimfull* of love for his subject. He loved trees as men love their children, and as you follow him, his simple, quaint style, and his earnest sincerity win you at once. You feel sure that he wrote, not to make a book, but because he *couldn't help it*. There are seventy-four pages upon "Making a Good Orchard," and many of the hints might be safely followed by our modern gardeners. He has inserted two or three sketches of trees, forms for a garden, &c., of which he says, "I have shadowed out these for the better capacity of those that are led more with the eye than the mind, craving pardon for the deformity, because I am nothing skilful either in painting or causing." He has seventeen chapters each of them short and to the point.

He gives minute directions for "Grafting" "Incising," "Packing on," &c. Let me copy his remarks upon the "Age of Trees," which will give you some idea of the old gentleman's style, and if you like it not, I will send you no more, but if it please your readers, I will add another chapter at a future time.

"All this treatise of trees tends to this end, that men may love and plant orchards, whereunto there cannot be a better inducement than that they know or at least be persuaded that all that benefit they shall reape thereby, whether of pleasure or profit, shall not be for a moneth, or one or many, (but many hundreth) yeeres. Of good things the greatest and moost durable is alwaies the best.

"If, therefore, out of reason grounded upon experience it be made (I think) manifest, but I am sure probable, that a fruit tree in such a soile and site, as is described, so planted and trimmed and kept, as is before appointed and duly foiled, shall dure 1000 yeeres, why should we not take pains and be at two or three yeeres charges, (for under seven yeeres will an orchard be perfected for the first planting, and in that time be brought to fruit) to reape such a commodity and so long lasting.

"Let no man think this to be strange, but percase and consider the reason. I have apple trees standing in my little orchard, which I have knowne these forty yeeres, whose age before my time, I cannot learne, it is beyond memory tho I have enquired of diuers aged men of 80 yeeres and upwards; these trees although come into my possession very evil ordered, misshapen, and one of them wounded to the heart, and that deadely (for I know it will be his death) with a wound where-in I might have set my foot in the heart of his bulk (now it is lesse) notwithstanding, with that small regard, they have had since, they so like, that I assure myself they are not come to their growth by more than two parts of three which I discerne not only by their owne growth, but also by comparing them with the bulk of other trees.

"And I find them short (at least) by so many parts in bigness, although I know those other fruit trees to have beene much hindered in their stature by evill guiding. Here thence I gather thus.

"If my trees be a hundred yeeres old, and yet want two hundred of their growth before they leave increasing, which make three hundred, then we must needs resolve, that this three hundred yeeres are but the third part of a tree's life, because (as all things living besides) so trees must have allowed them for their increase one-third, another third for their stand, and a third part also for their decay. All which time of a tree amounts to 900 yeeres, three hundred for increase, three hundred for stand, and three hundred for his decay.

"But every living thing bestows the least part of his age in his growth, and so must it needs be with trees. A man comes not to his full growth and strength before thirty yeeres, and some slender and cleane bodies, not till forty, so long also stands his strength, and so long also must he have allowed in course of nature for decay.

"Ever supposing that he be well kept with necessities, and from and without straines, bruises and all other dominyring diseases, I will not say upon true report, that physicke holds it possible, that a cleane body kept by these 3 doctors—Dr. Diet, Dr. Quiet and Dr. Merriman may live neere, a hundred yeeres. Neither will I here urge the long yeeres of Methushalah, and those men of that time, because you will say man's days are shortened since the flood. But what hath shortened them! God for man's sinnes; but *by meanes*, as want of knowledge, evill government, ryot, gluttony, drunkennesse, and to be short on increase of the curse, our sins increasing in an iron and wicked age.

"The testimony of Cicero in his booke De Senectute, is weighty to the purpose; that we must in *posteris actates ferere arbores*, which can have no other sence than that our fruit trees of which he speakes can endure for ages.

"What else are trees in comparison with the earth; but as haire to the body of a man!—Haires endure long, and are an ornament and use also to the body, as trees to the earth.

"So that I resolve upon good reason that fruit trees well ordered may live and like a thousand yeeres, and beare fruit, and the longer the more, the greater and better, because his vigor is proud and stronger when his yeeres are many.

"You shall see old trees put their buds and blossoms both sooner and more plentiful than young

trees by much. And I sensibly perceive my young trees to enlarge their fruit as they grow greater, both for number and greatness.

"It is good for some purposes to regard the age of your fruit trees, which you may easily know, till they come to accomplish twenty yeeres, by his knots. Reckon from his root up an arme, and so to his top twig, and every yeeres growth is distinguished from others by a knot, except lopping or removing doe hinder."

We think the worthy writer somewhat enthusiastic in his calculations—and fancy he would believe as implicitly in the seven cedars of Lebanon, as Lamartine himself. But there is such a love for trees manifested throughout his little work, that one easily forgives his enthusiasm, and as we travel back two hundred years, we fancy the honest, kind-hearted Yorkshire man living himself almost to the age of Parr, and sitting under his own vines and apple trees. One of his concluding sentences is as follows:

"What shall I say? A thousand pleasant delights are attendant in an orchard; and sooner shall I be weary, than I can reckon the least part of that pleasure, which one that hath and loves an orchard may find therein."

REMARKS.—The above pleasant article is from a lady. It has remained longer in "our pigeon-hole" than it ought, and longer, we promise, than the next one shall, after we get it. There is a beautiful earnestness in her remarks, as well as in the text she speaks from; and we really believe they would excite us a little even if they were not from the hand of a lady! We wish we could hand our correspondent an old volume entitled "Markham's Farewell to Husbandry," some idea of the quaintness and beauty of which she may get by referring to the volume of the *Farmer* for 1852, page 243. But it was a borrowed gem, long ago returned to its owner in Connecticut, so that we cannot please her or gratify ourselves by so doing.

For the New England Farmer.

FRONT-YARD FENCES—ALDERS.

MR. EDITOR:—Your correspondent "S. G. B." inquires the best way to build a front-yard fence. I would advise him to set stone posts in holes two and one-half feet in depth, and the same in diameter, and to fill the space around them with small stones well packed down with a crow-bar and nothing else; and then drill two holes in the face of the stone about 4 inches deep, but not very large, with a space of 3 feet between the holes for the purpose of securing the joist on which the pickets are to be nailed. Take some large bolts, (square) and put them through the joist and drive them securely into the stone holes. The joist should be about 3½ by 5 inches, or thereabouts. Pickets 4 feet long and 3 inches wide, with the same space between, and then draw a line on the top of them and saw them true, and then you want a rave on the top with a groove in its under side, in width the thickness of the pickets; and that laid on the top, nailed occasionally, makes the whole firm and strong.

The best time to cut alders is in June, and the

best way is by having one to pull the tops over, while another cuts them up; but if they are very large cut them down snug to the ground, and when sufficiently dry, pile and burn them on the ground. It is of no use to cut them only in the summer thinking to kill them; such is my experience. In the future I may ask a few questions.

W. N. S.

Kensington, N. H., 1853.

For the New England Farmer.

PLEASANT WORDS FROM "DOWN EAST."

MR. EDITOR:—I imported six bushels of seed oats and two bushels of barley last fall from Scotland, which I sowed this spring, and for the information of those who may have an idea of importing seed from the old country or elsewhere, I purpose giving you some statements connected therewith. There is a prevalent idea that oats or other grain from the mother country never do well here the first season, but judging from the present appearance of mine, I am inclined to believe that if the seed be good, and is properly taken care of, and gets a fair chance, it will do as well the first year as it will the second. They have now fairly commenced to grow, both the oats and barley, and I have no doubt but they will turn out well. The oats are the early kind. They were raised near Forfar by one of the best farmers in that county. They are as clean and pure as any oats I ever remember having seen; the barley also is very pure and clean. They were sent out last fall and lay all winter at St. Johns. When they came to hand this spring, I found they had been very carefully done up in two barrels, which had been well smoked or fumigated, and made perfectly tight, so that the grain smelt as fresh as when it had been put in. They were shipped at Dundee, and the freight to St. Johns was 3s., the duty 1s. 6d., entries 9d., cartage 1s. 3d., (I was charged nothing for storage,) so that the freight and charges, exclusive of inland cartage amounted to 6s. 6d.

The soil and climate of this province is well adapted for oats, and I think it would be well for the country if their cultivation received more attention. Oats in a general way are raised for horse feed, and little pains is taken to improve them in quality; the seed is seldom changed, and is often of inferior description, being light and mixed with foul seed and other grain. If the farmer is asked why he does not sow better and cleaner oats, he will say, "O its no use being very particular with them, I can get just as good a price for poor oats as I can for the best." Oats ought never to be sowed more than twice or three times without being changed. The seed should always be the best—well cleansed, and free from other grain so that it might be fit for being made into oat-meal for family use. Good oat-meal when properly cooked, is quite palatable, and ought to be used in every family; as an article of diet, it is one of the most wholesome aliments that can be set on the table. I shall venture to assert that if the people in this country, generally, were to use more oat-meal and less superfine flour, that sickness and consumption would be much less prevalent in it.

I should like to inquire of you, or any of your

correspondents, something about the harvesting and management of seed clover. It has been tried here on a small scale, and the seed is found to be of a very superior quality, but the greatest difficulty seems to be in getting it thrashed and cleansed—some information therefore on that subject would be very acceptable in this quarter.

In reference to the remarks which you made on my previous communication, I must observe that you gave us quite a compliment. My inference is that you seem to be quite satisfied respecting the abilities of our soil, and the superiority of her productions, but that you would like to know something respecting the quality of our men and women. I shall endeavor to gratify your curiosity a little in that particular, but you must excuse me if I do not notice anything about the smartness of our own sex; suffice it, to give a word or two about the other. I think, sir, if you were to come through here and see our *lasses* at work about the farm, you would say that they are better stuff than your New England girls. They can plant a bushel of potatoes a day, (in good shape,) dig 25, top an acre of timothy, and reap 24 dozen oats. They can pitch hay, pick stones, pile brush, rake round the stumps, team a horse, and milk the cows. They can wash and dress, and bake and brew, and knit and sew, card, spin and cook, and clean in style, and catch the horse that beat the boys, and drive the sheep to pasture. The girls are very scarce here, people come a long way after them for wives.

J. T.

Harvey, N. B., via Calais, Me. }
June 8th, 1853. }

REMARKS.—Thank you, "John Taylor." Where persons make a business of raising clover-seed, they have a machine, moved by horse power, which they take into the field and gather the clover heads merely, leaving the stubble on the ground. These heads are generally on the "rowen," or second crop. After being gathered, they are threshed and cleaned up much as other seeds are.

Your account of the ladies in "the Harvey Settlement," smacks of olden times. As a wife, we don't want one, having *the best* in "the States" already—but as "a help," gracious, how things would shine at River Cottage, if we had one of your girls! But then, should we feel safe? "Team a horse! top an acre of timothy! reap 24 dozen of oats!" and probably bind 24 men if they were to steal a kiss unfairly, from one of these Amazons!

But we are glad to hear from them, and may make more particular inquiries, in person, some future day.

SPECIAL MANURE FOR GRAPES.—The wine committee, at the exhibition of the Cincinnati Horticultural Society, reported that of two specimens of wine, one from grapes to which a special manuring of potash had been given, the wine from the manure grapes was "bright, clear, and mellow, like an old wine." The other was declared to be less matured in all its qualities, nor was it clear. The grapes themselves, from the two portions of ground, were also presented to the committee. "Both were delicious and well ripened,

but it was considered that those from the manured land were sweeter, and that the pulp was softer."

For the New England Farmer.

INDIGENOUS FRUITS AND SHRUBS.

MR. BROWN:—I desire information on the rearing of our indigenous fruit trees and shrubs from seed. All our cultivated varieties of fruit have sprung from wild types, generally of little value. Careful culture, and successive reproduction from seed, have greatly increased their size, and improved their flavor. Our wild fruits are equally promising. Their size and flavor are quite equal, and in many instances superior, I believe, to exotics of the same genus. Besides, by their hardiness or other peculiarities, they are perfectly adapted to our climate.

The sweet scented crab-apple, (*Pyrus coronaria*) figured in the March number of the *Farmer*, doubtless might be ameliorated, and become a splendid fruit, possessing many valuable characteristics. The choke cherry (*O. Virginia* of Gray) differ wonderfully in their varieties in size, and flavor; and I have seen varieties of each growing about the fields, which almost equalled the May Duke in size. I might go on, but these will suffice for examples. It may be objected that the ameliorating process is the work of an age,—very true; but we are enjoying the fruit of our ancestors' labor. Let us repay to posterity. However the time requisite for the amelioration of many fruits, is perhaps less than is generally believed. My experience is that the *Amygdaleæ*, or almond family, will fruit in four years from gathering the stones; the bramble in three years, and the grape in four to five. I have been unsuccessful in producing the *Vaccinææ* or whortleberry family from the seed. Perhaps yourself or correspondents can instruct me. I find no information on the subject in the books.

J. GRIFFITHS.

REMARKS.—Perhaps Mr. HYDE, of Newton Centre, can throw light on the subject.

ERGOT IN GRAIN.

Some time since, while looking over the files of the *National Intelligencer*, our attention was arrested by a communication from a Parisian correspondent, in which were detailed some of the proceedings of the Academy of Sciences, the celebrity of which is too well and generally known to require any remark. The writer, evidently himself a man of science, says:—

"A paper was received from Mr. VALOT, of Dixon, on the larvæ of various insects destructive to plants, such as the *concineth masculata*, *cimes circularis*, &c., and on the existence of ergot as a disease peculiar to rye, but Mr. VALOT announces that he has seen the same disease in barley. After the reading of this paper M. A. JUSSICA said that he had recently seen several ears of wheat which had been attacked by the ergot, and that the disease in rye had made great ravages."

We are not aware that the disease called "ergot" has ever been really destructive in this country.

Yet it is well known that grain is frequently attacked by insects in the bin, and not unfrequently ruined by them. We have seen wheat, rye and barley, thus injured. When our national legislators, in the plenitude of their wisdom and patriotic liberality, shall allow national support, and endow a college for the promotion of agricultural science, the labors of the entomological department will no doubt throw some light upon this interesting and important study. Simple individual effort can scarcely be effectual in so extended a work.

For the New England Farmer.

MAKING BUTTER.

MISERS. ERRORS:—It is somewhat singular that such different results should be produced by two persons in the operation of churning;—one person operating in your house, and the other in your next neighbor's. They are as different as the rose and the poke weed in odor, and in taste no more alike than sherry wine and castor oil. Is all this difference owing to the house, or is it in the churn, the woman or the cow? There is no luxury produced in the tropics that is a more agreeable addition to the substantials of the table than good butter; and carrion is not much more disgusting than a great portion of the grease that is marketed in the metropolis of our State under the name of butter.

This, however, is foreign to the purpose which I have in hand, and for which I have taken my pen. This is not to write upon the qualities of butter, or to give directions for making a good article. My object is rather to make inquiries than to give a lesson, and my aim is toward the *principles* upon which the article is made, rather than the *mode* of making it. I have often thought it rather strange that a man so thoroughly scientific, and at the same time so practical, as Chaptal, who devoted a chapter of his excellent and instructive work on Agricultural Chemistry to the subject of butter, should have omitted to inform us how it is produced. Perhaps there is not a butter-maker in this Bay State, though we have a very conceited opinion of our superior knowledge, that can answer the question involved in the four closing words of the last sentence, simple as it seems. By answering, I mean, of course, giving a satisfactory explanation. Is the oily part of the milk, which constitutes the article called butter, separated from the lime, serum, &c., by mechanical force, chemical affinity, temperature, or fermentation? At first sight many readers will exclaim that it is a useless, nonsensical question, and they don't care to know. A sad error. This knowledge is not only satisfactory, as *all* knowledge is in itself, but it is practical and useful. If known, it may afford a clue to the true mode of making it, so as to be produced by less labor, and also of a superior quality:—and will direct us to the true desideratum in making the best churn, if churn must be used, or in finding a substitute for that machine, that will do the work more easily, speedily, or perfectly. It is well known that butter cannot be produced if the cream is at too high a temperature. The proper degree of heat is said to be 48, or that of the well or cellar in summer. The

operation of the churn seems to be founded on the idea that the separation is mechanical, and that the cohesion of the oily particles with the lime is so slight, that repeated and continued blows with a dasher or stick will completely effect this separation through the entire mass. But if it *may* be produced by mechanical force of beating, it is certain that it *may* be produced, also, without that means, as is proved by the fact I shall relate. In my boyhood, about forty-five years since, my mother kept a single cow, to supply her family with milk. The household being pretty numerous and several children, she usually found a full demand for the milk:—but having several times collected a redundancy of cream, and having no churn, she tied her cream in her thick pudding bag, and buried it in the ground twelve or eighteen inches, (if I remember aright,) and in the morning took out most excellent butter, into which the cream had been changed. Now there is no mechanical process in this conversion. And the question is, did the temperature alone effect it, or was it assisted by chemical affinity, or by fermentation. Air produces fermentation:—so does water. And there is opportunity for the admission of air, either by the proceeding above related, or by churning. The oxygen or hydrogen of the air might also have the effect of separating the lime from the oily part of the milk, by mere chemical affinity, without fermentation. And this, I am inclined to think, is the true process in the production of butter, which is easier at a particular degree of temperature, because, the cohesive power of the oil and lime is feebler at that, than at a higher temperature. In churning, not much air is admitted into the churn, but the most is made of a small quantity, by stirring it so that it comes in contact with every portion of the cream. Now if I have named the true principle of butter making, it will afford a light which will serve to guide our wives in this part of their rural industry, and the ingenious may make an application of it that may be serviceable in the keeping or conversion of the cream, or in the construction of the churn.

I think, that an explanation in full of the secret of the production of butter by a scientific and practical chemist, with detailed statements of the experiments by which he has attained his results, would be an interesting paper for your columns. There is nothing more interesting or more beautiful than the application of science and of useful knowledge to common things.

You mentioned in one of your late numbers that a gentleman of Brussels had recently found a way of separating the cream from the milk more speedily and perfectly, by mixing a solution of carbonate of soda, and other matters. This, I think, confirms my idea that the separation is effected by chemical affinity, and affords ground for the inference that the farther separation of the other matters from the butter may be produced by the mixture of the same or some other substances. It may be the carbon of the atmosphere which produces the separation, by its affinity for the other matters of the milk and cream, stronger than that of the oily matter.

Some of your readers will say, perhaps, as before intimated, that all this is of no use. Those who make good butter are content to know how to make it, and don't care to inquire into the re-

donale. And those who make bad butter are not the kind who are disposed to seek knowledge. While many people think all knowledge useless, and others talk about *useful* knowledge, in distinction from that which is useless, I am one of a third class who think *all* knowledge useful. But I think especially that the knowledge of the principle of the production of an article of so much prominence in our system of dietetics, composing a part of the table of every family through every season, may be well considered in the class of useful knowledge, if there be any that is useless.

W. J. A. B.

Essex, Dec., 1852.

For the New England Farmer.

HORTICULTURAL EXHIBITION AT CONCORD.

The first exhibition of fruits, flowers and vegetables, under the auspices of the Concord Farmers' Club, was held in the Court House in this town, on Saturday, June 18. The contributions were abundant, and the flowers choice, rare, and various beyond expectation. The season was too early for a great display of vegetables, but the turnip-rooted beets, and summer squashes, exhibited by Judge Hoar, were very large and fine, and the strawberries superb.

The contributions of wild flowers were abundant. Among them we noticed the superb Laurel, the delicate and fragrant Linnaea, the charming Eglantine, the spotted Geranium, Irises, the graceful verticillate Lupin, and many others.

Among the roses, we noticed that finest of all yellow roses, the yellow Persian, the yellow Harrison, with its sweet-briar odor, the White English tree rose, one of the finest and most vigorous roses, and, after a long season of neglect, coming rapidly into favor again; the Black Tuscany, very dark; that finest of all white roses, Madame Hardy, Red Moss, White do., of which latter, Mr. Whieldon showed one cluster containing thirteen buds; that finest of all perpetuals, La Reine, Louis Philippe, Rivers, Madame Laffay, Lady Fordwick, Charles Duval, Marquis Bocella, Paul Peras, very large.

Among the climbers, we noticed the superb Prairie Queen, Baltimore Belle, Eva Corinne, and others. Of the tender roses, the Multiflora, Laura Davoust, very beautiful; Madame Plantice, White China, and the Yellow Noisette.

The weather had been hot and dry for several days, so as to injure considerably the beauty of the roses, but the display by Mrs. R. W. Emerson, was very fine, in great variety and the finest in the room. A fine Pittosporum from David Loring, and a superb Cactus Speciosissima, from Miss Thoreau, added much to the beauty of the show.

Magnificent bouquets were contributed by Mrs. E. R. Hoar, Mrs. F. R. Gourgas, Mrs. Frost, Miss F. J. Pritchard, Miss E. Hoar, and others; and a beautiful Rhododendron, and the delicate Linnaea, by Mrs. Pratt. A wreath of Euphorbia and scarlet Honeysuckle, by Miss Reynolds, was very handsome, and the Fuchsia and Cactus by Mr. John Brown, were rare and beautiful. William Munroe shewed a dish of superb Pansies and cut flowers, C. W. Davis, a dish of fine cherries, and W. W. Whieldon, a fine display of moss and other roses, and plants in great variety and beauty, and a

pair of large cucumbers. J. B. Moore, contributed a large basket of Strawberries, Verbenas, Pansies and Geraniums, very fine; and Abiel H. Wheeler, shewed the first potatoes of the season. Col. Holbrook, sent a magnificent bouquet; Mr. Pratt, a monstrous bouquet of Laurel, Mrs. Pratt, Moss Roses, from plants raised from cuttings, which is an achievement in floriculture; Rev. B. Frost, fine strawberries, M. Pritchard, Boston Pine strawberries, and C. W. Goodenow, Hunt Russett apples in fine preservation; E. W. Bull, shewed Chinese Peonies, in four varieties, Roses in fifty varieties, and cut flowers.

Charming bouquets were contributed by Mrs. C. W. Goodenow, J. M. Dodd, Miss Mary Howe, Miss Wetherbee, Miss Rebecca Barrett, Misses Brown, Fred. Brown, John Hosmer, Mrs. N. Brooks, Miss Mackay, who shewed a fine Gladiolus, Mrs. S. G. Wheeler, Mrs. J. Heywood, Miss Sophia Ripley, Mr. Hudson, Miss Bates, and many others not marked with the name of the contributor.

Altogether, the show was very beautiful, and indicated both skill in cultivation, and good taste in the selection of plants, many of them being of the choicest kinds.

At the next exhibition—which will take place on Saturday, the 3d of September, we hope to have a still larger number of contributors, and to show fruits and vegetables in abundance.

For the Committee, E. W. BULL.

THE MOTH.

A great fuss is usually made "about this time" to keep off that delicate and beautiful little insect, the Moth Miller. She has certain instincts, as well as other people, and they lead her to deposit her eggs where food can be found when her young are "born into the world." So she, like a good mother, looks about industriously and claps an egg here and there under the seams of our best woollen coat, or in madam's wrist-cuffs, or boas, or muff; or, for want of better shelter and more refined feeding, will deposit half a score of eggs among the hair of the buffalo robes that hang in the carriage house. Now this is very innocent and commendable conduct throughout all bug-dom, but is looked upon by us as a peculiarly insinuating proceeding by the bugs, and a form of deposit not altogether approved.

So the good housewife tries to defend herself with cedar closets, camphor draws, rosemary, saffras leaves and other delectable odors, but the bugs care no more for them than does a hectoring gallant for a tap with his lady's fan; they are true to their instincts still, and will continue to be so in spite of all the nostrums of *Æsculapius* and all his disciples!

But, fair lady, there is one *infallible* remedy; simple, and always within reach. Shake your garments or furs well, and tie them up *tight* in a pillow-case or any cotton or linen bag, and hang that in the garret, or any where under cover, and your valuables *will be perfectly safe from the ravages of the moth.*

For the New England Farmer.

A NEW INSECT.

MR. BROWN:—I have noticed in some of the agricultural papers, accounts of the depredations of the canker worm; but in our vicinity an enemy has appeared upon our fruit trees, the apple and cherry, which threatens to destroy our entire crop. So far as I can learn, the foe is a stranger to our fruit-growers, and for some days was thought to be the canker worm of former days; but on examination it appears very different. It is similar to our former foe in some points—it is spread upon all parts of the tree, upon every branch, and when the limb is shaken, it drops from it, suspended by a web, then winds up its web and again gains its position on the tree. The trees, when badly eaten, present a dry and sere appearance. In all these points it is like the canker worm, as it is also in size, and to a casual observer, in passing by an orchard, it would be pronounced their work.—In many respects it is dissimilar, and evidently belongs to another class of insects. The canker worm is brown, this is nearly white, with two longitudinal stripes running its whole length; the canker worm is slow of motion, this is very quick and moves rapidly from place to place in all directions to escape an enemy—the canker worm moves forward by doubling or opening and throwing forward its head and forepart;—this is provided with 16 legs—6 near the head, 8 near the middle, and 2 at the tail, and uses them with great celerity in running. The canker worm has no shelter upon the tree, but lies out upon the leaf or branch; this forms itself a house by webbing the corner of a leaf, into which it retreats on the first appearance of danger; the canker worm rarely eats the fruit, if it can get leaves; this is now eating into and spoiling and disfiguring the fruit. Of the insect which produces them, I know nothing. My neighbors say about 3 or 4 weeks since, they noticed an abundance of small millers of an ash color, and they may have proceeded from them. If this insect, with its habits, are unknown, we have before us a work of careful observation, as the first descent of these depredators threatens more injury to our fruit than any other insect which has attacked our trees. If there is not enough to spoil my trees and fruit *entirely* now, I am sure that double the present number on those of my trees which are most eaten would not leave me an apple or a leaf remaining. I wish for information on this subject—are they in other places? Or is Sherburne exclusively favored with their presence? Have they been known before? if so, can they be prevented or driven off?

R. C. STONE.

Sherburne, June 21, 1853.

REMARKS.—We regret that this article came a few hours too late for last week's paper. The insects spoken of have been numerous in this State, in New Hampshire, Vermont, Connecticut and New York, and probably in other States: but we have heard only from those mentioned above.

Your description of the insect generally agrees with our observation; but we can find only *six* legs instead of *sixteen*, as you say. The head is shaped like that of an otter, and near the back extremity of the under jaw there are two legs, one

on each side, a short space intervenes, and then there are four legs, two on each side. Half way along the body, there are two protuberances which strongly resemble the spinneret of the house-spider, and two more of nearly the same shape at the tail or termination of the body. These do not terminate with claws as do the legs, but are blunt and have the appearance of being soft and spongy, and if used in walking, operate as does the flies foot on the pane of glass. We are inclined to think that these instruments are used both for walking and spinning its web, though in our examination of the insect under a pretty good glass, we did not see it spin as we have the spider.

We have received several short communications relating to the insect which we shall publish, but look, with some impatience, as we know many others do, to Professor HARRIS for a better knowledge of this new invader.

IS THE MOLE A DEVOURER OF VEGETABLES?

We answer no—he is a benefactor to the planter and gardener, instead of a destroyer of vegetables. Away, say we, with the erroneous ideas that they feed on garden vegetables and the newly planted seeds of the field crops; let us hear no more complaints against this little royal ermine coated friend, who is only a seeker and devourer of earthworms, and bugs, and the larvæ of insects deposited in the rich garden mould, or the manure drills of the cultivated fields. Ignorance is a greater tyrant than ROXBURGH ever was, and it is surprising that the natural history of at least all the more common animals, is not better understood, even amongst the educated and intelligent. Thank God! with all the introductions from old Europe,—she has never sent us a professional mole catcher—such lazy louts, as those who, with springs and snares, do jobs of mole-hanging for the gardeners of old England, at so much a head. The mole is a study for the lover of nature. His snug nest, deep in the earth, with walls of oak leaves, and lined with the most delicate grasses, shows that he is a considerable architect. The long galleries which lead out into those pasture grounds abounding in his favorite food, are scientifically constructed, and show him to be *nature's engineer*. His industry—flying by peculiar locomotion, with great rapidity, from one point to another—is a lesson to biped sluggards. It is true, that in search of food, he is a perfect *earthquake* amongst young vegetables; for he has no respect for their radicles when he plunges through the soft mould in quest of the insects and their larvæ, which feed upon their roots. The chief food of the mole, according to BACHMAN, is the earth worm, (*Lumbricus terreus*), and he says that they would each devour forty or fifty worms to satiate their inordinate appetites. They invariably rejected vegetables of all kinds, but would feed on flesh, chrysolides, and, even on each other, when not supplied with their proper food. One lived on a dead pigeon for a long time. These facts prove their carnivorous nature; and we would hazard little in saying that the mole is highly beneficial in destroying these insects. Vegetables are often cut and drawn into the ground,

and the charge is laid upon our *scraping* favorites. Another animal, says BACHMAN, one exceedingly shy in its habits, does the mischief; LECONTE's pine mouse, (*Arvicola pinetorum*.) is the destroyer so much complained of and is truly very injurious to vegetables. Since the innocent character of the mole is established, upon the authority of the greatest of living naturalists, we hope that this numerous and varied family will be allowed, in uninterrupted safety, to dig and delve for the good of man, and thus keep under those insects which, breeding and dwelling in the earth, cannot be destroyed by the birds. They are both wise checks, which the Creator has placed here, to aid and restrain nature, by the exercise of their peculiar functions, and we say again, *protect the moles and the birds.*—*Southern Agriculturist.*

For the New England Farmer.

KYANIZING TIMBER.

MR. BROWN:—I saw in your last *Farmer* an inquiry respecting the kyanizing of timber. In your remarks you say that "the process has been abandoned, it having been ascertained that it does not preserve timber from decay." As I think such conclusions do not exactly agree with facts which have come under my notice, I take the liberty of sending you a short statement of the result of kyanizing in this place. In 1847, I was employed to kyanize the bridge-timber and cross-ties, for a part of the Providence and Worcester Railroad. The ties were of spruce, and hemlock, six inches square. From the small size of the ties, they soon began to fail to hold the spikes, many of the hemlock ones proving shaky. As kyanizing was a new thing to me, I felt a curiosity to see the result, and accordingly watched the appearance of the timber as the ties were from time to time taken up to substitute larger ones; and recently, a very large part of the ties at the joints of the rails have been taken up, and out of the several hundred which I have seen, not more than two or three ties were decayed at all, and those were evidently from unsound trees. The general appearance of the kyanized ties is such, that the people in the vicinity are purchasing those taken up, and setting them for fence posts, after having been used for ties about six years. Mr. Thompson, (the man who has the charge of keeping the road in repair at this end) tells me that he finds all the kyanized ties and timber free from rot. I will add that I have an open trough (for carrying off the water from a sink spout) made of kyanized spruce plank, partly in the ground and partly out, which has been in that position six years, and appears to be perfectly sound. I know that it may be said that six years is not sufficiently long to test the value of the process, yet as I see chestnut ties unkyanized, rotting sooner than the spruce and hemlock, I must wait a longer time to be satisfied that the kyanizing does no good.

Respectfully yours, J. H. BENCHLEY.
Milbury, June 20, 1853.

P. S. Should any one be disposed to try the kyanizing, I will cheerfully impart such information as I possess respecting the process, &c.

REMARKS.—Mr. B. will please accept thanks for the above remarks. We formed our opinion of the

inefficiency of kyanizing from a conversation with a gentleman recently an engineer on one of the public works of the general government. We should be glad to know that the process is a valuable one.

For the New England Farmer.

COWS SHEDDING MILK—BUTTER-MAKING.

GENTLEMEN:—Can you, or any of your correspondents, make known a simple and effectual method to prevent cows from shedding milk?

Will some one who has practical experience, describe in the *Farmer*, the whole process of butter-making, including the place for keeping milk, (its ventilation,) the kind of pans, depth of milk in them, churning, salting, (and other ingredients, if any,) and place of keeping it in the tub, especially as respects dryness, or moisture, &c.

R. P.

DOCTORING CATTLE.—The following remarks under the head of Veterinary, in the Dec. No. of the *Prairie Farmer*, are so physiological, just, sensible and worthy of the attention of every farmer, that we transfer them to our columns. These seem to bear the impress of the "Old Drs." (K) cerebral perturbations, whose waves when they run high and furrow deep, never fail to float something ashore worthy to be picked up and garnered among our choice things. Dr. Kennicott always, *generally* says good things:

"We have one piece of general advice to offer, under this head. Treat all domestic animals upon the same principle that you would the animal MAN—making due allowances for the circumstances of the case.

The best general remedy is CARE; a comfortable shelter, and a kind and timely attention to natural wants; and the less medicine and the fewer medications the better. But if you will "doctor" your cattle, do not employ quacks, nor follow every floating recipe; but get a good veterinary practitioner, if to be had, who has read the books of his profession, and understands them; or better still, perhaps, read yourselves; and follow the indications, if you are right. And if not, better trust to nature, three times out of four. More cattle, as well as MEN, are doctored to death than people in general suspect."

For the New England Farmer.

SETTING FENCE POSTS.

DEAR SIR:—A correspondent, in your paper of June 4 asks a remedy for the upheaval of fence posts by frost, an evil which is more or less experienced among fence holders in proportion as the soil in which they are set is more or less wet, clayey, &c.

An excellent preventive for this action of frost, and one highly beneficial to the yard and contiguous grounds, may be found in thoroughly under-draining. Let the drain run parallel with the fence at a distance of two or three feet from it, and be of a depth greater than that to which the posts are set; where there is no superabundance of water, there will be but little action of frost.

Another method which we have often seen tried, was, to dig the hole considerably larger than the

post that was to occupy it, setting the post in the centre and filling around it with small stones, pounding them down—as the earth was replaced. By this operation great firmness can be given to posts.

The higher and heavier the post, the deeper it must be set in the earth to give it firmness, and the more care must be had to keep it in a perpendicular position while setting. If it inclines but slightly, either way, it will commence acting on the principal of the lever to throw the fence over.

To secure the durability of his posts, S. G. B. will find it for his advantage to invert them or set the top end downwards. In our own experience, we have found that a post from the same tree, will last one-fourth longer when so set, than it will if set as it grew butt end down, in which way moisture will arise from the earth through the sap vessels and diffuse itself through the post,—dryness follows, and moisture again succeeds, and rotteness ensues before due time has passed. If the post is inverted, the sap vessels can no longer give ascent to liquids, and no absorbing process will be going on. But where posts are inverted the part above ground should be reduced so that the diameter shall be no greater than it is below the surface, and if less, the less liable the frost will be to upheaval, leaning, &c. If the posts your correspondent proposes to use have been cut a year, and lain with the bark off, their durability will in no way be diminished but rather increased by the process. Yours truly,

W. B.

Elmwood, June 6, 1853.

WHAT THE FARMER MOST NEEDS.

It is not a college endowed by the State, says a cotemporary; it is primary schools, to prepare farmers' sons and daughters for the higher walks in science as applied to agriculture. They need organization. They want farmers' clubs and neighborhood libraries of agricultural books: They need discussion. They need more intercourse, not only in their own town and county, but throughout the State and country, to see and learn what other farmers are doing, and if they have improvements, learn what they are, and adopt them. This is the greatest need of farmers. They need to become satisfied with their vocation; to get rid of the prevailing notion that farming is, necessarily, an unmental employment; that is, that the farmer has no occasion to think; has no occasion for education, and never can become wealthy or what the world would call respectable, while engaged in the culture of the earth, and therefore he seeks the first opportunity to escape from an avocation placed under ban not only by all others, but his own class also. The great need of the farmer is, that he shall declare himself independent of all other classes; at least, more so than they are of him, and of course he is entitled to engage in any other calling whatever; and if he is a man of toil, that is no reason why he should not be a man of intellect. The great need of the farmer is organization, and this must be accomplished by a few self-sacrificing men, who will undertake the labor of establishing and maintaining farmers' clubs, in every neighborhood. Farmers need to drop politics and take up agriculture. They must talk, read and think, and they will be sure to act or their children will act for them.

WEEDS.

"One year's seedling makes seven year's wooding."

This old proverb conveys an important truth. Thoroughly to eradicate the plants to which one prolific parent will give birth, is a matter of no small trouble and expense. The proliferation of some species of noxious weeds, is almost beyond conception, and when permitted to mature their seeds on soils under cultivation, and well fitted for their support, they are a great evil, and a source of no small trouble and annoyance to the farmer, to say nothing of the injury they inflict upon his crops. It is an excellent plan, therefore, to go over the cultivated fields and lands late in autumn and eradicate every weed that can be found. No matter how small or insignificant may be its appearance, it will assuredly produce seed; and this, when disseminated broadcast over the fields by the winds, will germinate, and give birth to a progeny, the perfect eradication of which will take more of the time and energies of the laborers, than the crops will warrant.

It has been remarked by the moralist that the thistle and mullein are ever the inseparable companions of the sluggard, and it must be confessed that the atmosphere which appears so congenial to the one, appears to possess something in its constitution highly advantageous to the other. Wherever found, weeds indicate one of two things:—that the farmer has injudiciously undertaken more than he can accomplish, and do the work well, or they indicate a state of indolence and inactivity.

Some of our agricultural friends are in the habit of gathering up the spurious vegetation of their fields, and depositing it in their yards and styes. This is an admirable plan, provided the vegetables have not become mature. In all cases, however, where the ripening of the seed has been effected, and the vital principle is sufficiently developed to ensure propagation, the practice can scarcely be attended with other than the worst results.

A very erroneous opinion appears to prevail in relation to the degree of heat engendered by manure while undergoing the process of fermentation; the common presumption being that it is sufficiently intense to ensure the destruction of any seed which may be exposed to the influence of the fermenting mass. This supposition, however, will, upon careful examination, appear wholly unsustained by results. The fermentation which putrescent manure undergoes—unless under very peculiar circumstances—is rarely, if ever, found to rise sufficiently high to ensure this object. The seeds of the common red sorrel—one of the most pestiferous of all weeds in cultivated land, as well as those of the mullein, white weed, and numerous other plants which so annoy us, appear to be in no way injured by the utmost degree of heat that

can be produced without an actual combustion of the heap.

On the contrary, many seeds appear to derive an actual advantage from it,—the heat to which they are subjected, inducing a more speedy germination and development, so that by the time the soil is fit for their reception, or for the reception of the manure in which they are contained, they are just in the proper condition to take root and vegetate, before those upon which the husbandman bases his expectation of a crop, have had time to swell. Owing to this premature development, the fields are often stocked with a spurious vegetation, and that which was supposed to be the true economy, results in a ruinous waste; the small quantity of manure accruing from the decomposition of the haulm, being purchased at an enormous outlay of labor; and what is still worse, the soil instead of being purged of its noxious weeds is fouler and more prodigally infested than before. Those persons, therefore, who contemplate cleanliness of cultivation, should destroy the weeds that infest their fields before they mature their seeds. This may require care and labor but is not impracticable. But should any escape the hoe, the scythe, or the hand, let them be carefully gathered together in some convenient place and burnt.

The thistle, in some districts is one of the most troublesome weeds with which the American farmer is called to contend. Yet we often see it growing in farm yards, gardens, by the road-side, and even in the corners of cultivated fields, in patches sufficiently extensive to ensure the production of seed enough to "stock" an entire town-ship!

This is bad policy. Although the thistle is a "hard customer," and a most impoverishing tenant, it is yet a harder master. When once permitted to usurp the soil, its eradication is attended with much difficulty, and its toleration with ruin to the richest soil. It is now common to consider all productions as *weeds*, which are not purposely planted or sowed. The wheat that vegetates in the corn field, and the corn plant that springs up accidentally among the cultivated plants of the garden, is as much a *weed* in the strict acceptation of the term, as the burdock which rears itself in the pasture, or the thistle which fouls the mowing field.

As most species of spurious vegetation are of an indigenous character, they possess, naturally, a hardness and vigor of constitution which enables them to subsist and flourish on soils which are poor and thin, and to survive injuries, which no valuable or cultivated plant, not indigenous in the soil, can do. This tenacity of life will suggest the necessity of extra hoeings, and greater care in their eradication than is usually bestowed.

For the New England Farmer.

STATE REFORM SCHOOL AGAIN.

MR. EDITOR:—Some of your correspondents kindly endeavor to remove the stigma impressed on the Institution at Westborough, by the supposed neglect of the personal condition of the boys. No one will more heartily rejoice, than myself, if this can be fairly done. Having advised to the committant there of several boys, and given the assurance, that they would be well cared for, I could not endure the thought, that anything should appear to the contrary. An Institution like this, under the special guardianship of the State, especially the State of Massachusetts, which has the reputation of being the model example in all benevolent enterprises, should be, like Caesar's wife, above suspicion.

I perceive that something is said about using the lands connected with this farm, and the *two other farms* lately purchased by the State, for the purpose of experiments in agriculture. Why may not this be done? At either of the Institutions, it will be easy to command any amount of labor that may be desired, at the same time promoting the health and comfort of those that labor.

Will it be said that the lands are not fitted for successful experiments? Then let the experiments be fitted to the lands. The lands are a part of the Commonwealth, and we want to know, how all our lands can be turned to the best account. He who can show how two bushels of grain can be made to grow, where but one grew before, will deserve well of his country. A proper examination and analysis of the soils on these estates, will soon enable the Board of Agriculture to do this. My notion is, to place the cultivation of these lands under their direction, so far as it can be done without prejudice to other more imperative purposes of these establishments.

June 25th, 1853.

For the New England Farmer.

GIRDLED APPLE TREES.

MR. BROWN:—Dear Sir,—I noticed in the last number of your valuable paper, an article respecting apple trees; stating that they would grow after being girdled, if taken care of. I have a case to prove that they will grow without any care.

Last June I grafted some small trees in my pasture, leaving some of the larger limbs to grow until this season. In July I visited them, and found one had too many limbs, taking all of the sap from the scions. I took my pen-knife and cut away the bark from two of them, for the space of five inches, thinking it would kill them. I did not visit them again until a few days before I received your June number of the *Farmer*. Judge my surprise, when I found these limbs all in full leaf, drawing from the others nearly all of the sap. I examined them closely, to see if their was not some communication, but found none. I saw, however, that new bark had been formed on the limb part, nearly three inches, but none on the part next the body. This led me to conclude that the watery matter collected from the ground by the spongioles, is sent up through the woody fibres to the leaves, and there changes its oxygen for carbon, the material it wants to form wood; and descends along the trunk forming a layer of wood next to the bark. Now if there is a place denuded

it cannot pass it, leaving the part below without this fibrous matter, unless there should be twigs and leaves below the girdle, and consequently no growth. This is my theory; please set me right if I am in the wrong, remembering that I am a young farmer.

L. W. C.

Globe Village, June 20, 1853.

For the New England Farmer.

CROSS FERTILIZATION.

MR. EDITOR:—My experience does not correspond with the theory of your correspondent of June 22d, in relation to producing fruit trees from seeds. He says, "the farmer selects his best apples for eating and the market, and makes the rest into cider. The pomace he plants for a nursery. These seedlings will be of the poorest kind." I think it best to select seeds from young, healthy and unworked trees, and these are generally unpalatable apples, fit only for cider. What is the aim of nature? It is to furnish a healthy reproduction of the plant, having the characteristics of the parent or parents, as the case may be. And to continue its species it must have perfect seeds. The object to be attained by the fruit grower is pulp, not seeds. It is a well known fact, that when we obtain a good fruit, it has a good and large pulp, with small seeds. With many of our good stone fruits, the seeds will not germinate.—Therefore we must not begin with fruits that have reached their highest limit of perfection.

In these days of cross breeding, when the principle has been reduced to a science, will it be good policy to plant seeds from good trees, which he says are the production of seed of two varieties, mixed by the pollen? It is obvious to all acquainted with fruit or plants, that there are certain limits in crossing plants. The offspring of many of our crossings, (being mules) will not produce perfect seeds. Seeds produced by crossing are found to possess a character composed of the characteristics of both their parents, although some may be superior to their parents. Would it not be a better way to plant seeds produced by cross fertilization, than those gathered promiscuously from a good fruit-bearing orchard? Certainly a much larger proportion of our seedlings would bear good fruit, therefore we should need fewer trees, because we could have a few seeds of each crop. While in the other way they might all be crossed by the earliest blossoming tree in the orchard, and in that case would all have the same male parent. Each seed has a pistil, and at its summit the stigma. Some fruits, as the strawberry, have many pistils. By cross breeding, each pistil may be impregnated by the same male, by keeping the flower covered with a gauze bag. A stigma once impregnated, cannot be impregnated again. In the natural method of impregnation, I think it would be an uncertain business. It might be fertilized by its own pollen—or a part of the seeds, or a part of a tree might be so fertilized. The stigma is not always in a right condition to receive the pollen. It may be too late, or too early. The wind or insects may bring pollen from different and far off trees, and each seed may be fertilized by pollen of different trees. Such being the case, can we adopt his mode of planting seeds with a reasonable prospect of success? M. Poiteau informs us, that the celebrated Duhamel,

during the long course of his scientific career, planted the seeds of all the best fruits that were eaten at his table, and not one produced fruit worthy of cultivation. This French mode has long since exploded. The Belgians are admitted to be the gardeners of the world, and as their mode of producing new fruits has been more successful than any other, will it not be better to follow them?—Their theory is, that in proportion as a fruit is removed from a wild state or state of nature, by reproductions, or by planting the seeds of the last production, the fruit will become ameliorated until it reaches the highest state of perfection of which it is susceptible, which is usually about the fourth or fifth generation, and that from this point it deteriorates or passes back to its original qualities.

REMARKS.—We believe there is much more talk than actual knowledge upon the subject of the above communication. We know not that we are prepared to endorse fully the leading idea of our friend N. Are the labors of the past all to be thrown away? Are our labors to be of no use to posterity? Would we improve our apples, must we go back to the native crabs? Would we improve our stock of cattle, must we go to the buffaloes on the prairies of the West, or to the wild herds of the Tartars on the steppes of Central Asia?—Would we improve the race of men, must we seek our wives among savages, or train up the children of savages instead of our own?

Has it ever been demonstrated that native stocks do not deteriorate with the lapse of time? But we leave the subject to our correspondents.

For the New England Farmer.

A NEW WEED.

MR. EDITOR:—I send you here enclosed a specimen of weed, found on the farm belonging to Wm. C—, in the town of T—, N. H., and is nowhere else to be produced, in this vicinity. When first discovered, which was five or six years ago, there were but a few sprigs; now it covers nearly the half of an acre. It is very troublesome, and difficult to eradicate. No one that has seen it, is able to identify its name; and, as I presume you are a botanist, you may be able to give me information respecting it. Such information, if in your power, will be gratefully received.

W. K.—Y.

Tuftonborough, N. H.

REMARKS.—The plant enclosed is the "snap dragon," or "toad flax," (*Antirrhinum linaria*.) It is not supposed to be a native, but that it has been introduced. It is, however, very common by the road-sides about Boston, and is now probably following the fashion, and taking a trip to the mountains. It is a perennial, and should be immediately exterminated by mowing when in flower, as it seeds abundantly, and by plowing. Every farmer should be willing to do something for the public good, even though he be not immediately rewarded thereby—so plow it under.

CULTURE AND VALUE OF THE PARSNIP.

The following excellent article on the culture and value of the parsnip, is worth a careful perusal by every cultivator of roots. We think the writer mistaken in saying "that no insect or bug attacks them at any stage of their growth." They are always infested in a greater or less degree, with a worm which grows to a large size and becomes very beautiful before changing (as we suppose he does) into the butterfly form. They are very destructive to the parsnips set for seed, so that many cultivators have abandoned raising parsnip seeds for the market. We have never sowed them in the fall, and cannot say, from our own knowledge, how they would succeed.

CULTURE AND VALUE OF THE PARSNIP.

MESSRS. EDITORS:—As one who has lived twenty years upon a farm, searching all the while for reliable information, both from his own experience and from that of others, ought to be in possession of some "fixed facts" and settled opinions; and as duty, propriety, and fraternity require that we should allow others the opportunity of benefiting by our experience, I feel moved to give you a few items of information which I think very satisfactorily settled by evidence within my own observation.

Disliking long prefaces, and trusting that all your correspondents will dispense with them, I commence the brief summary of my experience and observations of twenty years, by a statement in regard to the value of parsnips.

Parsnips for Hogs.—One of the things which I consider well settled, and a reliable and useful item of knowledge, is this: that parsnips, either raw or cooked, but preferably cooked, with the addition of apples, potatoes, &c., occasionally, were it only to prevent the appetite from being cloyed by "eternal sameness," constitute the best kind of food whereon to fatten a hog. They are also the best kind of roots for milch cows. Both hogs and cows eat them with avidity, and to the milk and butter they communicate a good, a delicious flavor. I have seen it stated some years ago, that beef made from parsnips brings the highest price in the London market. I think, though I may be deceived by imagination, that pork made from feed chiefly composed of parsnips, is sweeter than when made from anything else.

This is not the only recommendation which may be justly bestowed on the parsnip. Among its other good qualities is this—that it requires no care or housing in the fall, as all other roots do. In all the Middle, Northern, and Western States, potatoes, carrots, and turnips must be harvested and housed, or buried; and even when all this is done, and with good care and judgment too, a portion will frequently be ruined and lost by frosting, overheating, or decay from other causes.—Parsnips, on the other hand, require no care in the fall, as they may be left without injury in the ground all winter. They may also be planted earlier in the spring, as the frost does not injure them, even at the earliest stage of their growth, so that this root crop interferes the least of any with employments which crowd upon the farmer in the spring and fall. It continues to grow

through the whole season, until the ground freezes in winter; it requires no expenditure to gather or store it; it may be taken up on several occasions during the winter, and the roots that stay in the ground all winter, are not injured, and probably improved, by the frost. Parsnips seem to be eaten with more relish than either turnips or potatoes, and yield, in the raw state at least, a greater amount of nutriment.

Another advantage in cultivating parsnips is, that on a suitable soil—sand or loam, rich or well manured, and deep plowed—a large growth may be secured. At the rate of 1,200 bushels have been gathered from an acre of ground.

Parsnips may be planted either in spring, or in the latter part of summer, in August or September. The ground should be well manured, mellow, and deeply plowed, and the seed sown in drills, so as to have plants to thin out, while preserving them at about eight inches apart. This will probably require at about the rate of two pounds seed to the acre. The drills should be two feet apart, and the space between well cultivated and kept clear of weeds. If sown in the spring, the earlier the better. A larger growth may be secured, however, by sowing the seed in September. There will be some considerable growth before the ground freezes up, and the growth will commence again as soon as the frost leaves the ground in the spring, which will continue throughout the whole season, without running to seed. They will thus have a growing season of about twelve months; whereas, when sown in the spring, they can grow only eight or nine months.

All the advantages of this root crop have not yet been named. Among them are these—that they seem uninjured by either a wet or dry season, and that no insect nor bug attacks them at any stage of their growth. OBSERVER.

AGRICULTURE IN NEW HAMPSHIRE.

The extract below, is from the late message of Gov. MARTIN to the Legislature of New Hampshire:—

Agriculture is our leading interest, and although our State is more mountainous than any of our neighboring States, yet we can justly boast of large quantities of luxuriant interval; our uplands are productive and afford a pasturage unrivalled in excellence, and nowhere can the necessities, convenience and comforts of life be found, combined in greater abundance. Our agricultural societies, both State and county, are doing much for husbandry, and the growing interest in them evinced by most of our citizens is a favorable indication of their utility and of the benefits to be derived from them. The free interchange of information, scientific and practical, can not be too intimate, and the analysis of soils, their adaptation to the different crops, the various and best modes of culture, the rearing of stock, and orcharding in all its varieties, are matters of the deepest interest to the agriculturist. The three State Fairs which have been held have proved highly successful, and have afforded gratifying evidence of their usefulness. Our lands improved and under tillage number 2,251,488 acres; value of farms \$55,245,997; farming implements and machinery \$2,314,125; live stock \$8,871,901; orchard products \$248,563; domestic manufactory \$393,455. We

raise an average crop of 185,658 bushels of wheat; 183,117 bushels of rye; 1,573,670 bushels of Indian corn; 973,381 bushels of oats; 70,856 bushels of buck-wheat, 4,304,919 bushels of potatoes; and we produce 1,108,476 lbs. of wool; 6,977 lbs. of butter; 3,196,663 lbs. of cheese; 1,294,863 lbs. of maple sugar; and 598,854 tons of hay. Let the young farmers of this State estimate the foregoing products of the farm and dairy at fair average prices, and see what a fine aggregate of values they will have as the result, bearing in mind the while, that he who most increases the productivity of the earth, is the greatest benefactor of his race. I would renew my suggestions of last June, in regard to the establishment of an Agricultural Commission.

USE OF FLOWERS.

All things have their uses. The flowers not only please the eye but improve the thoughts, making them more gentle and better. The full-blown rose, expanded to its utmost limits, and shedding its fragrance on all within its reach, seems emblematic of a good heart, beaming forth its kind influences on all around. If the flowers could *think*, and *feel*, and *talk*, what lessons of gentleness and love would they teach us. All children love them; the old man leaning on his staff, pauses by the wayside and contemplates them with delight. A vase of fresh flowers in the sick-room stands as an emblem of the new life that will come when the tried spirit shall bloom with perennial lustre in the skies.

Flowers have kindly influences upon all; we can almost believe that there were no flowers in Paradise, or Eve had not yielded to the tempter. BACON and BURLEIGH did not disdain to bend their intellects and find recreation from their cares in the flower garden. POPE and Lord PETERBOROUGH, and ROUSSEAU, thought they could find friends in the flowers when they had no others. The Emperor DIOCLESIAN preferred his garden to a throne, at least, so Cowley said, and Sir WILLIAM TEMPLE had the amiable weakness to desire to have his heart buried in his garden.

What a beautiful custom was that in the island of Delos, at a marriage ceremony, where the inhabitants "assembled at day-break, crowned with flowers; flowers were strewed in the path of the bride and bride-groom; the house was garlanded with them; singers and dancers appeared, crowned with oak, myrtle, and hawthorne, the bride and bridegroom were crowned with poppies; and upon their approach to the temple a priest received them at the entrance, presenting to each a branch of ivy,—a symbol of the tie which was to unite them forever." The Greeks crowned the dead with flowers, and the mourners wore them in the funeral ceremonies.

And we love them and feel their influence here, cold and indifferent, as some say New England people are. No custom prevailed among the

Greeks more appropriate and beautiful than that of placing flowers before the congregation in our churches. This may be seen on any Sabbath in the First church in the old town of Concord, Mass. They have long been furnished by our fellow townsman, W. W. WHELDON, Esq. On the last Sabbath the bouquet was in the form of a cross, and nothing could be more suggestive of every thing that is "lovely and of good report." The cross was there, to be sure, but covered with nature's sweetest offerings; roses, the fox-glove, phloxes, the mountain laurel, double seringa, larkspur, spirea, and under the arms of the cross the beautiful *Deutzia scabra*, with its modest bell-like flowers. Did not sincere *heart-offerings* go up with the fragrance of the flowers to the Elysian fields above?

Flowers *do* speak, then, a clear and intelligible language; all, in a greater or less degree, find enjoyment in flowers.

"Are they not all proofs,
That man immured in cities, still retains
His inborn, inextinguishable thirst
Of rural scenes?"

For the New England Farmer.

WARTS.

MR. BROWN:—Dear Sir,—Seeing that you are ever ready to answer any inquiries, I would like to know what will take warts from the teats of cows. By answering the above, you will oblige,
GEO. CRUICKSHANKS.

Swampscot, June 21, 1853.

REMARKS.—We have known warts in numbers on the hands, cured by wetting and rubbing them occasionally, with a pencil of lunar caustic. Of course it must be used with care. We copy a paragraph from Cole's "Diseases of Animals."

"For warts, cut them open, and apply blue vitriol, (*sulphate of copper*), in powder. A physician was induced to try this, (and it was attended with excellent success,) from learning that a boy had many warts cured on his hands by sorting brass nails, from the influence of the copper in the brass. Neither the cutting nor the application is painful. Or apply to warts raw grated carrots, mixed with salt. Warts are sometimes cured by the application of spirits of turpentine, or lunar caustic."

We would not advise, however, to cut the warts open, as there is danger of making a sore more troublesome than the warts.

FINE CHERRIES.—MR. MIRICK, one of our friends from the United Family, at Haryard, handed us a branch from a cherry tree, the other day, loaded with most delicious fruit. It was so large as to spoil the old saying that "it isn't worth while to make two bites of a cherry," dark red, sweet, flesh firm, and heart-shaped. They call it by its French name, LOOK-NO-FURTHER, and really, with plenty of such at command, one would scarcely care to trouble himself for other kinds. We have rarely seen a finer cherry.



FRENCH BUCK, "MATCHLESS."

This is the figure of a fine French Buck, owned by Mr. GEORGE CAMPBELL, of West Westminster, Vt. In his description, he says the French Sheep are so well known at the present time, that it is necessary to say but little of them. "Matchless" may truly be said to belong to the "upper ten." He proves to be an excellent stock getter; is four years old, and weighed, on the first of last March, 280 lbs. His wool is very thick, good length, and fine. The French sheep are large and strong, and are well calculated for the production of both wool and mutton. The ewes are good breeders, and generally good nurses, and if well kept, will breed twice a year, if desired. They require good rich sweet pastures in summer, and good keeping in winter. These sheep are well adapted to locations where mutton, as well as wool, is considerable of an object. They are excellent feeders and if fed high will gain in flesh while suckling their young.

☞ Horticulture is that great gift of God to man, which makes desert places into gardens, and so beautifies the abodes of men as to resemble Paradise. Buildings without Horticulture, are but landmarks in a wilderness.

For the New England Farmer.

PALMER WORM.

MR. EDITOR:—After a lapse of upwards of forty years he has made his appearance this season; fulfilling the declaration of Scripture, that what the canker worm hath left, the Palmer worm has eaten. The habits of this worm are much like those of the canker worm; by a sudden shake of the tree it webs down in the same manner; it is not much more than half as large, and is of various colors. You take him in your hand and then touch him and he will snap out at once.

This insect you will find in many of our orchards, gardens and groves; he makes the most tender leaves his food; for instance, the Hubbardston Nonsuch apple tree has been eaten more than any other. The trees that leaved out late, or were transplanted this spring, have in many places been made entirely bare.

He does not attack the peach or pear tree, or grape vine. In the forest, he devours all that comes in the way; not even the white pine escapes its ravages.

This old enemy of trees is thrice as formidable as the canker worm, and I know of no way to check his ravages except in the use of whale oil soap, and this can be applied to small trees with good success, by the use of the syringe. The sprinkling of air-slaked lime over the small trees, I have found to have good effect.

The plum trees that I had timed over to keep

the curculio from, have not been eaten by this insect, while those that had not this preparation, have been injured.

I notice that his ravages have been very extensive in Lynn, Danvers, Topsfield; and more or less in most of the towns in Essex county. If its true character and habits are not found out, and a remedy applied, all will be lost.

Topsfield, June 25, 1853.

J. LAKE.

For the New England Farmer.

THE PALMER WORM.

An insect, formerly known by this name, has appeared in great numbers upon fruit and forest trees, during the past month. Apple, cherry, and plum trees, and, among forest trees, the white oak, have suffered more or less from its depredations in all parts of New England, and in the State of New York. Communications concerning it, accompanied by specimens, have been sent to me from Bradford, Andover and Westboro', Massachusetts; from New Haven and Salisbury, Connecticut; and from Keene and New Boston, New Hampshire. About the 10th of June, the same insects were first observed on fruit trees in my own garden, where, however, they have not been numerous, and have not done much injury. In other places, their ravages have been deplorable, and have been compared to those of canker worms; the leaves of trees attacked by them looking as though they had been scorched by fire. In some orchards, they have not spared even the fruit, which has been attacked and mostly destroyed by them. They have now come to their growth, and have finished the course, in their present form, for this season.

These insects agree, in all respects, with the accounts given of the palmer worms that prevailed in many parts of New England, in June, 1791. It was remarked, after this great visitation, that they did not return the next year in the same places. Whether, until the present season, they have ever again been observed, in the like profusion, is unknown to me. Probably some of these insects might have been found almost every year by diligent search. Perhaps they are the same as those heretofore called *fire-worms*, of whose history I cannot find anything in print.

A particular description of the palmer worm may be thought unnecessary and superfluous, since the insect has been so recently and so widely observed, and has been pretty well described in the newspapers. But, as I have little more to add concerning it, and have been applied to publicly and privately, for information on the subject, it may be proper to put on record an account of it as it has passed under my own observation. In its early stages, this worm, or caterpillar, though varying somewhat in color, is mostly pale green, with two slender brown lines along the top of the back, and a pale brown head. It has sixteen feet, six of which, near the head, are jointed, and end with a single claw; the others are merely fleshy protuberances without joints, the terminal pair being the longest. When fully grown, the insect measures half an inch, or rather more, in length, and then bears a striking resemblance to the common bud-worm of the apple tree; the back assuming, generally, a darker color, and the sides of the body being marked with black points, arranged

three together on each side of every ring. Two blackish semicircular spots or marks, may also generally be observed, at this period, on the top of the first ring. A few short hairs may be seen on the body by means of a magnifying glass. On my own trees, these insects have confined themselves mostly to the terminal leaves and buds; on others, in places where they have been numerous, they have spread over all the leaves, and have devoured the whole green substance, leaving only the network of veins untouched. They are exceedingly active in their motions, moving either forwards or backwards at pleasure, with a kind of impatient jerking motion, which renders it difficult to hold them. When the trees are shaken, these worms drop, and hang suspended by threads, like canker worms. Whether they leave the trees in the same way, when they have finished their course,—if indeed they do leave them at this time, and where they undergo their final transformations, I have not ascertained, being prevented by other engagements from watching their further progress. One of my correspondents has informed me that these worms mostly disappeared after a late hail storm; and another one states that they all took leave during a heavy shower on Monday last. A few, that were kept for observation in a glass jar, have covered themselves with a thin web of silk, and some of these have already taken the chrysalis from within their webs. More than half of my specimens have been stung by ichneumon flies, which have deposited a single egg in each one of their victims. The maggots bred from these eggs, are now leaving the lifeless worms, and are spinning themselves up in white, oblong oval, silken pods or cocoons. If the palmer worms elsewhere have suffered the same fate in the like proportion, we have little cause to fear for their ravages next year. The chrysalis is about one quarter of an inch long, of a pale yellowish brown color, and differs from that of the bud-worm in not having transverse rows of teeth, or little notches, around its body. The final transformation remains to be observed; and, until the insect is obtained in the winged or moth state, its scientific name cannot be determined.

On the morning of the 28th of May, I saw, in the cemetery at Worcester, immense numbers of gray or whitish moths, about twice the size of the common clothes' moth, flying about almost in swarms, being disturbed from the grass and trees by my passing. Two days afterwards, a few of the same little moths were seen in my garden; and Dr. Sanborn informed me that his garden was alive with them on the 23d of May. They were also very numerous, about the same time, at New Haven, and in other places since visited by the palmer worms. But whether the latter were, or were not, the descendants of these little moths, it would not be safe now to say. The moths, though not wholly unknown to me by sight, before this spring, have heretofore been so rare that my collection contained only a single specimen, and that in too poor a condition to enable me satisfactorily to investigate its scientific character and ascertain to what modern genus it belonged.

As attention has been generally directed to the habits of the palmer worm during the present season, other persons, more favorably situated than I am, may be expected to pursue and make known the further history and transformations of this de-

structive insect. I regret not being able to give a better account of it at this time, and still more that the pressure of my official duties necessarily interferes with the continued and further investigation it would otherwise please me to make upon it.

T. W. HARRIS.

Cambridge, Mass., July 6, 1853.

REMARKS.—PROFESSOR HARRIS will please accept our thanks for the above interesting and valuable paper. We can find no account of the worms that appeared in 1791, and are at a loss to know why this insect is called a *palmer worm*.

In the book of Joel i: 4, it is written; "That which the *palmer worm* hath left hath the locust eaten; and that which the locust hath left hath the canker worm eaten; and that which the canker worm hath left hath the caterpillar eaten." On reference to the edition of the Scriptures published by Knight, London, we find the following:

"The *palmer worm*.—The Hebrew writers generally agree that the four insects mentioned in this verse are different species of the locust; and this opinion has been supported by Bochart, with his usual ability and research. There is, however, a very strong objection to this conclusion, in the fact, that the three rendered 'palmer worm,' 'canker worm,' and 'caterpillar,' in our version, were not regarded as locusts by the Seventy, who were likely, in this matter, to be acquainted with the real meaning of the Hebrew words, and who wrote much earlier than any of those Hebrew writers who consider all the words to denote varieties of the locust.

"The original name, *palmer worm*, is *gazam*, of the Septuagint. This seems to be the caterpillar which was called by the Roman *ab erodendo*, from gnawing, as Isidore remarks. The ancients describe it as a worm, which rolls up itself in the leaves of herbs, and especially of the vine, including perhaps several species of insect under one name. Plautus, an old Latin poet, speaks of it as a mischievous "beast," that rolls itself up in a vine leaf. It does not fly like the locust from plant to plant, or run hither and thither like some other insects, and leave them half eaten, but continues upon the perishing herbage, till, by its sluggish motion and lazy jaws, it has devoured the whole. The ravages made by caterpillars are too familiar to render any expatiation upon them necessary. A reference to the respective meaning of the Hebrew, Latin and Greek terms, makes it probable that the same kind of insect was intended by *ab erodendo*. The Hebrew meaning to cut, to shear. The Greek, to bend, and the Latin gnawing—the first and last pointing out to us its mischievous operations, and the second, the habit of rolling itself up in the leaf, to protect itself against those enemies which are every moment upon the watch to secure it. The Arabic version has *dud*, which seems to be a general denomination for what we

call the larva state of an insect, such as, for instance, the caterpillar is in regard to the butterfly, being then in the second grade of its progress towards the perfect or *imago* condition." If this gives a correct description, the insect which has come upon us with such a withering power is not the *palmer worm*!

For the New England Farmer.

STATE REFORM SCHOOL.

MR. EDITOR:—I perceive your brother editor of the *Culturist and Gazette*, at Pittsfield, has kindly copied my remarks, supplementary to your article on the State Reform School at Westborough, and interlarded such exceptions, as tend to put the boot on the other leg. Can it be, sir, that we, and those who were with us, were entirely in error, in our conception of the condition of things at this establishment? I should like to know whether the good doctor has ever been there himself. He expresses a *quere*, whether it is possible to keep so many boys in a clean and healthy condition. If it is not, I should say, they should never be brought together. Even the State itself has no authority to administer a slow poison, in the form of *filth* and *vermin*.

His notions of "the connection between sin and punishment" are so abstract, that I must leave them to be settled by the theologians of the schools. I make no pretension to such knowledge. If I rightly comprehend the purpose of this Institution, it is for the reception and education of boys *during their minority*; of those not sufficiently matured in crime, to be fit subjects for punishment in our gaols and houses of correction. He speaks of the benefits that may accrue from keeping alive in their memory, the errors of which they have been guilty. With all due respect to the doctor's opinion, I think it will be better to obliterate the recollection of past errors, by exciting a generous ambition to do well. Sir, what hope is there of a man or boy, who constantly feels, that he is looked upon with an eye of jealousy and suspicion? If you would have improvement, you should inspire confidence.

"To err is human, to forgive divine."

June 30, 1853.

ESSEX.

COWS HOLDING UP THEIR MILK.—It is well known that many cows when they first come in, when their calves are taken from them, will hold up their milk, sometimes to such a degree as almost to dry themselves before they will give it down. "A few years ago," writes a correspondent of an English newspaper, "I bought a young cow which proved to be very wild, and when I took away her first calf she would not give her milk. I had heard it remarked that putting a weight on the cow's back would make her give her milk down. I accordingly drove her into a stable, got a bushel of grain and put it on her back. While in this position she had no power to hold up her milk, for it came down freely. After doing this a few times, and afterwards putting my hand on the back of the cow, it would give way and she would immediately give down her milk." The rationale of this treatment appears to be that the weight counteracts the upward tendency of the animal's muscular action.—*Rural New-Yorker*.

PRACTICE OF SHOING HORSES.

Mr. Chas. Percival, veterinary surgeon of the Royal artillery, furnishes the following communication to one of the Dublin papers:

I have lately been devoting much attention to shoeing, and flatter myself that the horses under my care are as well shod as any in her Majesty's service.

The shoe I found in use here was made concave next to the foot, and flat on the ground surface, than which, in my opinion, nothing could be worse. This shoe I have had reversed, making the latter as concave as the foot will possibly admit of, leaving only sufficient room between the shoe and the foot, for the pricker to pass freely round, to remove dirt, &c. To the heels of the shoe I have given an inclined plane outwards on the foot surface, with three nails on the inside and four on the outside. The heels, instead of being cut off straight, are well sloped, and about the same thickness as the toe. The shoe, one-third as thick at the heel as the toe, recommended by the late professor, the majority of our horses could not travel in. There are many pernicious practices which smiths in general, if left to themselves, fall into, viz:

1. Mutilating the frogs by improper cutting. I have at length got my farriers to understand that the only part of the frog which ever requires cutting, unless ragged, is the point, to prevent the sensible frog being bruised between it and the coffin bone.

2. Inflicting serious injury to the crust by an improper use of the rasp, but especially the coarse side of it.

3. In fitting the shoes, by cutting too much out of the crust at the toe to admit the clip. The shoe is consequently set too far back, instead of being fitted full to the crust, and afterwards rasping away the crust, making the foot, in fact, to fit the shoe, instead of the shoe to fit the foot. This is a faulty practice, and very seriously so, which smiths in general are very apt to fall into; one, too, which renders the crust shelly, for that part into which the nails are driven from time to time is in this way rendered weak.

4. In turning shoes, smiths in general do not attend sufficiently to beveling or sloping the edge of the shoe from the foot to the ground surface, which I consider of great importance, especially if horses are given to cut or interfere in their action.

5. Cutting the heels of the shoe off straight. This is also a very bad practice. If well sloped, like a shoe for hunting, to which there cannot be any objection, they are less liable to be pulled off by the hind shoe catching in them, and contribute more to safety of both horse and rider.

6. Leaving the inner edges of the hind shoes at the toe sharp, which, if rounded, will in a great measure prevent over-reaches, as well as render the fore shoes less liable to be pulled off by their catching in the heels of the former. Squaring the toe of the hind shoe for horses that forge, or "carry the hammer and pincers," as it is termed, leaving the horn projecting over the shoe, is, in my opinion, good as a general rule, not only preventing that unpleasant noise, but rendering horses less liable to overreach and pull off their fore shoes, provided, however, attention be paid to rounding the inner edge.

7. In rasping the under part of the clinches,

farriers are very apt to apply the edge of the rasp improperly to the crust, forming a deep groove round the same, which cannot but be injurious to the foot, and, together with taking away too much of the crust in finishing off the foot, must have a tendency to render it shelly. Curving the shoe at the toe, after the French fashion, where horses go near the ground, I am very fond of; but I cannot see any advantage in it as a general practice.

REMARKS.—We hope every shoer of horses who reads this, will compare its suggestions with his practice. As is the case with most of the mechanics of this country, there is only one in a hundred that understands his business. It requires art, to shoe a horse properly, as well as to make a watch. There are important principles involved in the operation which the smith should study and understand. We believe there are more horses led into shambling gaits, and awkward overreaching and stumbling habits, by bad shoeing, than by all other causes combined. And when the horse has acquired these habits, he is check-reined, martingaled, and abused in other abominable ways, because he does just as his owner ought to have known he would do under such a course of shoeing!

LOVE ALL.

BY C. D. STUART.

Love all! There is no living thing
Which God has not created;
Love all! There is no living thing
Which God has ever hated.

His love sustains the meekest life—
Whate'er doth live or perish—
And man may not disdain to love
What God has loved to cherish.

Love all! For hate begetteth hate,
And love through love increaseth;
Love all! For hate shall faint and fall,
While love, like God, ne'er ceaseth.

Love is the law, the life supreme,
The goal where all are tending;
The hate shall die, the strife shall cease,
But love is never-ending.

ENTOMOLOGICAL DISCOVERY.

The following note from our friend, Mr. S. Maxwell, Jr., describes a discovery he has made, which will prove of considerable value, on account of the ease with which the nit is removed. We have examined a number of plums since receiving the note and find in every case the nit under the brown speck, except where the puncture has exuded gum—then the worm is hatched out and has commenced his depredations.

CURCULIO.—I have within a week discovered a fact about the curculio which was new to me, and have also found it entirely new to others to whom I have communicated it. All those who have had fruit bitten by the curculio; have probably noticed a little brown spot on the inner edge of the crescent-shaped puncture. That little brow spot covers the egg left by the bug, and the puncture seems to be made for a place of safety for the young worm when hatched, and also to facilitate its oper-

ations in boring into the fruit. Persons having plum trees, and leisure, and wishing to preserve a few of the fruit after it has been bitten, can with the point of a penknife, or with the thumb or finger nail, easily remove the spot from its place, and no harm will come to the fruit except the scar left by it.—*Greenfield Republican*.

For the New England Farmer.

BARN CELLARS, RESTORATIVE GASES, AND OTHER SPECULATIONS.

MESSES. EDITORS:—Most of the farmers in this vicinity who have renewed their barns have also built capacious, well-constructed cellars under the whole building, at a large additional expense. A little experience has led me to make the following remarks on the subject of barn cellars.

Eleven years ago, I had a cellar constructed under my cow hovel with the intention of sheltering my manure from the weather and saving the liquid excrements, which, under our former management, without a cellar, were mostly lost. The advantages I have realized from my cellar have not but partially answered my expectations. The cellar was closed with matched boards in front, and walled with stones at the sides to keep it tight; the floor over it had openings to let the excrements pass from the hovel into the cellar, which would be nearly full in the spring when wanted for use. On removing the dung from the cellar we found a large part of it dry and hard, and in no condition to decompose into suitable nourishment for immediate food for growing vegetables, the urine not being sufficient to supply the required amount of humidity necessary to promote fermentation, its state of decomposition being quite behind that thrown out at the hovel window and lying the same length of time, which had been kept damp by snow and rain. I am not able to comprehend what loss green manure can sustain in a few weeks while lying in a conical form as thrown from the window before the process of fermentation takes place to disengage the gases, or even afterward within the space of a year. I have known some of our best practical farmers prefer to have their dung heaps lay in that form till they were rotten enough to put in the hills or to spread to top dress grass land. How much the loss is, during the process of fermentation, in the escape of nutritive gases, cannot be ascertained without accurate chemical experiments and nice observation. We cannot make a perfect compost without a large supply of water in the form of rain, or from some other source, and, therefore, I think the rains which fall upon a heap of green manure must rather benefit than injure the process of fermentation and rotting. After housing my dung four or five winters, I have turned back to the old custom of throwing it through the hovel windows again. I believe the gases which escape and ascend from our manure while in a state of fermentation and decomposition descend again on being condensed by some chemical agency in the laboratory of the atmosphere, and fertilize our lands which lie in a state of rest, and as evidence of the truth of my theory, I will refer to practical facts familiar to all farmers of observation who have reared herds of cattle and sheep.

Lands which have been exhausted by cropping are restored to fertility again after supplying a

flock of sheep with their food, and their owners with wool, pelts and mutton, after a lapse of a few years, so that they will produce respectable crops of grain again without manure; now how does this happen if the nutritive gases do not return again to the earth in such large quantities as to furnish the sheep with a living, the farmer, with wool, meat, and pelts, and at the same time (after so large a deduction and draught upon the soil) it should continue to gain in fertility so as to produce one or two crops of grain once in five or more years! Those who keep swine in their barn cellars, perhaps have much the advantage of those who do not, as a hog is an animal that never leaves a moveable thing as he finds it, generally examining all sides of it, even if it is excrement of the most offensive kind; his olfactories are such that he appears to enjoy the odor as he would the most delicate perfume, and as willingly works among the most nauseous filth as sport in the fragrance of the garden of Eden. Hogs are called dung makers, which is a very appropriate name, and to those educated in a barn-cellar no one will dispute their merit to the title, but the idea of eating pork saturated with the filth of a barn cellar is revolting to the sensibilities of those who are so particular as to trace effects to causes. The greatest advantage, and that a real one, that I have found from having a barn cellar, is from the liquid excrements being all saved and conveyed through holes in the floor into the cellar where quantities of earthy and vegetable materials are deposited purposely to absorb the urinous effusions from above; in this way we have made very valuable manure for top-dressing of grass land or for grain crops, and are compensated for the extra expense of making a cellar.

The first barn cellar within my knowledge in this neighborhood was made by Col. LOAMMI BALDWIN, the noted engineer of Middlesex Canal, more than half a century ago; after trying it a few years he told a friend of mine who was about building a barn, that he could not advise him to make a cellar under it from any beneficial experience he had received from his own cellar; and my neighbor built a large barn without a cellar, influenced, as he told me, by the Col.'s advice. The effluvia which fly off from our barn cellars and dung heaps are not lost but return again to us with interest, though the same gases may not descend upon the same man's premises where they originated; they appear to be equally distributed by an impartial Providence upon every man's farm, according to his number of acres. The man who enriches his land by plowing in his clover or buckwheat is indebted to the nutritive gases which escape from the decomposition of animal and vegetable substances, and enter life in another form after descending from the great atmospheric laboratory.

Nutritive gases transferred from the decomposition of animal and vegetable substances to be re-organized in the form of buckwheat and clover, constitute a considerable portion of those productions as well as other vegetables; or why should those plants which are entirely indebted to the earth for their sustenance add any fertility to it by being plowed under to decompose there, as the earth would only take back what she gave, and gain nothing by the operation. The chemical operations of the Divine mind as much surpass the

researches of human chemists, as the formation of living animals surpass the manufacture of the imitations contrived by man to represent birds, beasts, and men, or as the power of the Almighty to create is beyond man who tries to imitate.

SILAS BROWN.

Wilmington, June 28, 1853.

APPLE TREES KILLED BY POTASH.

The *New England Farmer* mentions a case where an orchard of one hundred and six thrifty Baldwins were washed with a solution of potash of the strength of a pound to a gallon of water, which killed the whole of them in a few days. In all attempts to doctor seeds, plants, trees, or animals, great caution should be observed. Guano is often used in a way that destroys the vitality of seeds; and in soaking seed wheat in brine, blue stone or copperas water, a similar disaster frequently results by steeping the seed too long. It is better to spread caustic ashes, guano and urine too sparingly than in excessive quantities, or in a too concentrated form. First and last, we have used a good deal of liquid manure, and never add less than five parts of water to one of urine. A pound of potash to five or six gallons of water instead of one, will form a wash of sufficient strength to kill moss on apple trees, and probably the cotton aphid which so abounds at the South. The finest peach trees that we ever saw in any part of our extended country, were treated frequently to a wash of soap-suds after the servants had washed the linen and other clothes for the week. Spent ashes from which soap has been made, and the refuse wash-water are of great value as manures, and particularly to apply to the soil over the roots of all fruit trees. Many thoughtful economical farmers at the North, are careful to apply all soap-suds and kitchen slops not suitable food for hogs, to their compost heaps, which is an excellent plan, for the alkalis in wash-water, in all cases where soap is used, or ley, aids in rendering the silica in the straw, corn-stalks, grass or weeds composted, soluble manure. The object of composting coarse vegetables, is to break down their tissues, and render them an unctious, soluble mass. The caustic ammonia developed in putrid urine; the alkalis in ashes, and alkaline minerals, lime and magnesia, all extract oils from plants and favor their decomposition.—D. LEE, in *Southern Cultivator*.

REMARKS.—That is good sound teaching, and just such as we should expect from Dr. LEE. He not only understands the chemical nature of potash, but by ample experience, its action upon vegetable life. If all agricultural editors could come to the opinion that they not only *do not know everything*, but that many things which *they think they know* should be dealt out sparingly to the people, there would be less error in practice. We were called a few days since to look at a beautiful lot of plum trees, filled with fruit, which had been syringed with a solution of the salts of ammonia; nearly every leaf of them was as dead as they ever are in December; even the hardy currant and strawberry leaves were as dead as though they had been laid on a hot iron, wherever the solution had

touched them. The proprietor of the garden informed us that he found this nostrum recommended in the same paper where the "pound and gallon" potash theory comes from.

We do not doubt but either of these may be used without injury to the tree, under certain circumstances, but the practice ought to be abandoned entirely, because we can never control those circumstances.

For the *New England Farmer*.

TRIMMING PINE TREES.

MR. EDITOR:—Sir, in your paper of the 25th inst., I notice an inquiry of G. F. W., about trimming *pine trees*, and in your remarks you ask for information upon the subject. I have a piece of land which has for the last twenty years been coming into pitch pines, and as I use *evergreen* boughs to shelter my strawberry beds, &c., in winter, I have, annually, pruned the young pines in November, for the last twelve or fifteen years. I cut the limbs with a saw, close to the trunk; pitch exudes from the wound, and becomes hardened by spring, effectually protecting the wound from the weather. I do not think any injury results from the pruning; it has the same effect as upon deciduous trees, making them grow less stocky, which is an advantage where the trees are not close together. Where they grow in thick groves, the limbs die while the trunk is small, leaving a clean trunk, free from large knots.

I have occasionally cut limbs from them in spring—a much larger quantity of pitch exudes, and as the weather is warm, it does not harden over the wound. Yours respectfully,

F. W. MASON.

Dartmouth, June 27, 1853.

REMARKS.—Mr. MASON has done the public a favor in giving his experience on this subject. We had made many personal inquiries among our best farmers, but found none who had made experiments. There is, indeed, very little known among us in relation to the treatment which our forests ought to receive.

For the *New England Farmer*.

CANKER, OR SOME OTHER WORMS.

MR. EDITOR:—The canker worms, in countless numbers and with astonishing rapidity, are almost universally desolating our orchards. Many noble trees, which a few short weeks ago enlivened the scenery with their beautiful green, now look almost as brown as though the frosts of Autumn had swept over them, and the rest will be likely to share their fate unless speedy measures are taken to check or destroy the little invaders—if they can be called invaders, living, as they do, just where they were born.

Of course, all will depend upon your valuable paper, for information upon this subject, and probably they will not be disappointed. I have heard some express an opinion, that the insect now so common, is not the real canker worm; I think it is; but should be glad to have some one who knows, settle the question; any way, they are bad enough, and they seem almost exclusively to at-

tack our most valuable trees—viz, apple trees—as though they owed mankind a peculiar grudge. While looking over the third volume of the *old New England Farmer*, published in 1825, I think, after something relative to the canker worm, I found on page 327 an article, recommending locust trees, planted thickly through the orchard, as a remedy for their ravages; after reading this I remembered that on my father's farm there was a small locust grove with two or three apple trees standing almost in contact with it. Upon examination, these trees proved to be equally infested with the rest, thus disproving that theory.

Should you think it worth while to insert this, it may help some who, like myself, may be referring to old papers, and find this suggestion, and may not, as I had, have the means of judging of its merits.

S. G. E.

Chester, June, 25th, 1853.

THE HISTORY AND CULTURE OF THE MIGNONETTE.

The following, written by Dennis Murray, one of the best gardeners in or around Boston, for the *Journal of Agriculture*, will be read with interest:

It is now an age since this fragrant weed of Egypt first perfumed the European gardens, and it is so far climated, as to spring from seed of its own sowings. The *Reseda Odorata* first found its way to the south of France, where it was welcomed by the name of *Mignonette*, (Little Darling), which was found too appropriate for this sweet little flower to be ever afterwards exchanged for any other. By a manuscript note in the library of the late Sir Joseph Banks, it appears that the seed of the mignonette was sent in 1742, by Lord Bateman, from the Royal Garden at Paris, to Mr. Richard Bateman, at Old Windsor; but we should presume that this seed was not dispersed, and perhaps not cultivated beyond Mr. Bateman's garden, as we find that Mr. Miller received the seed from Dr. Adrian Van Royen, of Leyden, and cultivated it in the Botanic Garden at Chelsea in the year 1752. From Chelsea it soon got into the gardens of the London florists, so as to enable them to supply the metropolis with plants to furnish out the balconies,—a fact noticed by Cowper, who attained the age of twenty-one in the year that this flower first perfumed the British atmosphere by its fragrance. The author of the *Task* soon afterwards celebrates it as a favorite plant in London—

“—— the saabes fronted with a range
Of orange, myrtle, or the fragrant weed.”

The odor which this little flower exhales is thought by some to be too powerful for the house; but even those persons, we presume, must be delighted with the fragrance which it throws from the balconies into the streets, giving something like a breath of garden air to the “close-pent man” whose avocations will not permit a ramble beyond the squares of the fashionable part of the town. To such persons it must be a luxurious treat to catch a few ambrosial gales on a summer evening, from the heated pavement where offensive odors are but too frequently met with. We have frequently found the perfume of the mignonette so powerful in some of the better streets, that we have considered it sufficient to protect the inhabi-

tants from those effluvia that bring disorder with them in the air. This genus of plants, of which there are a good many species, was named *Reseda* by the ancients, from *resedare*, to assuage, because some of the species were esteemed good for mitigating pain.

We find that this sweet *Reseda* has crept into the armorial bearings of an illustrious family of Saxony, by the following romantic tale; the Count of Walstheim was the declared lover and intended spouse of Amelia de Nordbourg, a young lady possessing all the charms necessary for the heroine of a modern novel, excepting that she took delight in creating little jealousies in the breast of her destined husband. As the beautiful Amelia was an only child of a widowed mother, a female cousin, possessing but few personal charms, and still less fortune, had been brought up with her from infancy as a companion, and as a stimulus to her education. The amiable and humble Charlotte was too insignificant to attract much attention in the circles in which her gay cousin shone with so much splendor, which gave her frequent opportunities of dispensing a part of that instruction she had received on the more humble class of her own sex. Returning from one of those charitable visits and entering the gay saloon of her aunt, where her entry or exit was now scarcely noticed, she found the party amused in selecting flowers, while the count and the other beaux were to make verses on the choice of each of the ladies. Charlotte was desired to make her selection of a flower. The sprightly Amelia had taken a rose, others a carnation, a lily, or the flower most likely to call forth compliment; and the delicate idea of Charlotte in selecting the most humble flower, by placing a sprig of mignonette in her bosom, would probably have passed unnoticed, had not the flirtation of her gay cousin with a dashing colonel, who was more celebrated for his conquests in the drawing-room than in the field of battle, attracted the notice of the Count, so as to make his uneasiness visible; which the amiable Charlotte, ever studious of Amelia's real happiness, wished to amuse; and, to call back the mind of her cousin demanded the verses for the rose. The Count saw this affectionate trait in Charlotte's conduct, took out his pencil and wrote for the rose—

“Elle ne vit qu'un jour, et ne plait qu'un moment.”

which he gave to the lovely daughter, at the same time presenting the humble cousin with this line on the mignonette:—

“Vos qualites surpassant vos charmes,”

Amelia's pride was aroused, and she retaliated by her attention to the Colonel and neglect of the Count, which she carried so far as to throw herself into the power of a profligate, who brought her to ruin. The Count transferred his affections from beauty to amiability, and, rejoicing in the exchange and as well to commemorate the event which brought about his happiness and delivered him from a coquette, he added a branch of the sweet *Reseda* to the ancient arms of his family, with the motto:

Your qualities surpass your charms.

The mignonette is transformed into a perennial shrub, which dispenses its odors at all season of the year, by the following simple treatment: A young plant should be placed in a garden pot, with

a stick of about eighteen inches in height inserted by its side, to tie up its branches to; as it advances in height, the leaves and young branches being kept stripped off from the lower part, so as to form a stem to the height required, this stem will become sufficiently hard and woody to endure the winter, by being placed in a green house or the window of a sitting room, and may be preserved for several years, if air is given to it whenever the weather will allow, so that the young branches do not become too delicate. As soon as the seed vessels begin to form, they should be out off, which will cause the plant to throw out a fresh supply of blossoms; but these plants should never be suffered to perfect their seed, as it would greatly weaken them, and generally cause their entire decay; for the sweet *Keseda* is an annual in its proper climate, and therefore naturally decays when it has ripened its seed. It is frequently observed that the seeds of the mignonette which scattered themselves in the autumn produce finer plants than those that are sown in the spring, which should teach us to sow a part of our seed at that season of the year in pots or boxes, kept in frames through the winter, or in a green house.

For the New England Farmer.

BLACK KNOTS AGAIN.

MR. BROWN:—Respected Sir,—I have read with considerable interest the communication (or rather the postscript) of your correspondent J. Lee, of Salisbury, Conn. My object in noticing it at this time, is not so much to convince Mr. L. by my words, but to put him as well as others in a way to convince themselves. It is no wonder that he did not find very distinct traces of insects in old knots of last year's growth, for the grubs leave early in August, and the knots enlarge and alter their shape very much after that time. But now is the time, the present month of July. Watch carefully the first swellings, (they will be difficult to find, for they do not turn black until late in autumn,) mark them well, and dissect them from time to time. The grubs are so minute at first that it will require a lens to discover them, but will in a short time become visible to the naked eye, then cut out sections of the limbs, and follow the practice described in my communication published in the March number of the *New England Farmer*. And if the result does not prove the same, Black Knots must be different, in different localities.

I stated in my communication to the March number, that the warts had almost entirely disappeared in New Haven, and its vicinity within three or four years. Such was the fact for two or three years, but I find, upon examination, that they were as numerous as ever last year in some locations.

I have perused, also, with much interest, the article on black knots, copied from the *Horticulturist*, published in the June number. The writer has evidently paid much attention to the science of Entomology, and has followed a very judicious course in his war of extermination. But in my opinion he has carried on his operations against three distinct species of insects, instead of one. The one that punctured the twigs with a sting or Ovipositor, must have been a species of Cicadae, Locust, for such is the course that species of insect follows. The cluster of eggs, covered with varnish, was probably that of the tent caterpillar,

while the black knot insect appears as yet unknown to him.

I have made the above remarks more to arouse a spirit of inquiry and investigation, than to arrogate to myself any superior knowledge of the subject. For the study of Entomology is one so intricate and difficult, that one short life is too little to obtain a thorough knowledge of it; it appears, therefore, to be the duty of students in the sciences to assist each other, although they may differ for a while in their opinions; patient investigation will, in time, bring them to the same conclusions.

Very respectfully,

MRS. NOTES DARLING.

New Haven, June 18th, 1853.

For the New England Farmer.

PROSPECTS OF THE SEASON.

BY A. G. COMINGS.

It is well sometimes to take a look ahead, and see how things are likely to turn out. We are now, [June 25,] sufficiently near the top of the hill, in the season, to desire to see what our agricultural prospects are.

GRASS.—Never during May and June, in any season remembered, have our New England pastures been clothed with a garment of more beautiful green. In the mowing fields grass has come forward early, and in this vicinity it now appears as though the crop would be light. Old fields require a cool, wet May, for the best product of mowing grass. The month was not dry; but much warmer than usual, this year. The grass shot up readily and rapidly, but not thick. On old fields, where the soil was not wet and cold, grass is thin, and the crop will be light. On new ground, much of what was sown to grass last year failed to "catch" well. Such ground will of course give but a light crop. Ground newly seeded with clover, in some parts of this county, has suffered much from the absence of the usual covering of snow, during the winter. Many fields show an entire or almost entire loss of the clover, by winter killing. I have seen acres together where the surface of the ground was covered with the roots of clover which had been thrown out of the ground by freezing and thawing. The season is now forward, and much grass, in this vicinity, is losing vitality, for want of more rain. The prospect is not favorable to the idea of a very heavy hay crop.

INDIAN CORN looks remarkably well for the time of year. If the latter part of summer should be as favorable as the first part has been, the corn crop will be very fine this year. But while we ought always to hope, we ought never to presume. Our expectations may be out short.

POTATOES have not reached their critical time of life. There has been a great planting, and if there should be a great rotting before the twentieth of September, it will not very much surprise some people. But we hope for the best of potatoes.

SPRING GRAIN has mostly suffered somewhat from the forwardness of the season. Much of it has the usual appearance of grain that is sown when the season is so far advanced that it comes on too rapidly. It grows up thin on the ground, is light strawed and light headed.

The mischievous bugs have annoyed farmers very much. They have left hardly a hope of pumpkins "for Thanksgiving." They have eaten the cucumbers before they could be picked. They have not even waited for a preparation of salt and vinegar. Squashes, summer and winter kinds, have been most mercilessly treated by the army of bugs. But somebody will raise some of all these things "for seed," undoubtedly.

The prospect is that there will not be much crowing about *fruit*, next fall. There are two reasons. One is, there are not so many of those wonderful roosters kept now, as were once. Crowing is therefore becoming a little unpopular, since the big Shanghai rooster burst his windpipe in an attempt to give a specimen of Chinese music. The other reason is, the fruit is, evidently, the most of it, destined to be "food for worms," like all fruit eaters. Apple trees in many places look as though some sudden stop had been put to the course of nature. I suppose, however, that it is all very natural for worms to eat, and for trees to look very bare when their leaves are gone, or very uninterestingly when the leaves appear to be dry on the tree. If good winter fruit does not command a price, next fall, it will be a little strange.

There is hope, yet, for a good lot of peaches. The little mischievous chap that bites the plums and the apples does not seem to be so fond of peaches. That is really encouraging. It is always a lucky idea to those who do not raise any, but have some cousins who do, to remember the relationship just at the best time to "go and see the folks and get some peaches." Well, who wouldn't!

We, here in New Hampshire, have our particular prospects. Our Agricultural Societies are wide awake, to make the year tell. Our legislature has had "the ague" over the part of Governor Martin's Message concerning an agricultural commission. They have finally put a wet blanket upon the whole subject and sent it to bed. Whether it will be found to sleep a whole year remains for time and tide to tell and establish. At any rate, the wisdom of this legislature has taken its shape. On this subject the mass of the people have no definite idea, and it is therefore, to them, a matter of indifference whether it goes this way or that.

The hay-season is now upon us. The ground is becoming very dry. The old idea of making hay while the sun shines will not be forgotten. But if hay is scowled excessively under a burning sun it will lose very much of its value, by the crumbling of the leaves and heads.

We are all looking forward for better success in all our efforts, in the future. Of what has been, and of what now is, we have some knowledge. But concerning the future all is conjecture. Yet we humbly hope, and every mind struggles in the world of mind to accomplish some desired and desirable service. The agricultural student wrestles violently with the difficulties which oppose his progress; and the plowman studies deep philosophy while he treads the newly opened furrow, and pushes his conquest at the point of the plow.

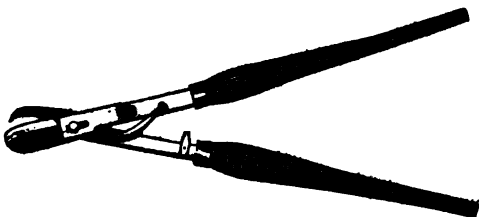
An interest for the honor of agriculture is fast ripening to maturity. Things as of old are passing away. Scholars will be plow-boys, and philosophers will be farmers. The spirit of this change is touching the springs of motion, and

what is to be very soon will be. Ignorance must learn to be ashamed, and the rage of dandyism, in its thousand forms, must give place to that practical common sense upon which the weal of the world depends.

Mason, N. H.

A. G. C.

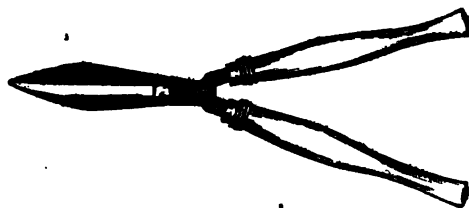
SLIDING PRUNING SHEARS.



The figure above represents a pair of *Sliding Pruning Shears*. They have a movable centre for the motion of one of the blades, by which means, instead of a crushing cut, they make a draw cut, leaving the section of the part attached to the tree or shrub smooth, as if cut off with a knife.

These shears are especially convenient and comfortable in trimming raspberry, blackberry, gooseberry and other bushes that have thorns, or for heading in peach or plum trees.

GARDEN OR HEDGE SHEARS.



These are admirably adapted for shearing hedges, borders of walks, or, if set with a keen edge, for heading in small trees.

GRASS EDGING OR BORDER SHEARS.



These are used for trimming the sides of box and grass edgings, and are constructed with a roller so that the operator may stand upright whilst using them; the one figured here has a wheel attached, which is generally considered an advantage.

ERRORS IN GROWING BEANS.—Lima bean vines are usually suffered to wind themselves around a pole twelve or fifteen feet high, and before the vine reaches the top of the pole, some beans are already of a size to be pulled, near its bottom. Lima beans should be pinched off when five and a half feet high, and they will readily throw out side shoots well filled with pods, which will ripen

before frost; whereas, when not shortened in, the beans on the upper ends of the vine cannot perfect themselves in time to be saved. It is unfair to expect a gill of sap to travel through forty feet of vine wrapped around a pole, and make a perfect bean at the extreme end of it.

BLACK KNOT IN PLUM TREES.

MR. EDITOR:—When the carrier brought the last *Farmer* into my door-yard, I met him, as I was returning from my garden, where I had been carefully examining some of the newly forming "knots" upon some young sprouts growing, or trying to grow in the vicinity of an old "purple damson" tree. I took the paper, and the first article I noticed, was the one on the first page, calling attention once more to this subject. After reading the article, which afforded but little light upon this perplexing point of inquiry, and which was chiefly designed to induce careful observation, at this favorable season of the year, I returned to the garden and renewed my examinations, and I will give you what *facts* I have discovered, and my speculations upon them. First the facts. These protuberances, or "knots," commence about the time the leaves open upon the trees, in the character of a swelling, or enlargement upon the side of the limb, and generally upon wood of the last year's growth; always upon young, fresh and sappy wood. Soon the bark cracks open for considerable extent upon the limb, varying from one to six inches, and sometimes extending along continually for half a yard. This opening in the bark is rapidly filled with a sort of fungus, or porous woody substance, in which the regular fibres of healthy wood do not appear, but which will readily suggest to the observer the idea of disease—of a bad sore—of a *cancer* upon a human limb. Indeed, I can think of nothing they so much resemble as cancers, or scrofulous sores, I have seen upon the human body. As these sores progress, they extend into the *bone*, or into the wood, come to the heart of it, and frequently nearly, or quite round and through the entire limb, and the wood becomes porous, resembling a diseased, carious bone, and dies.

Now for another fact: in examining these protuberances, at this season of the year, I have found, on examining them carefully, near the central parts of the branches, or more prominent portions, a small maggot, very small, but large enough to be seen with the naked eye. My observations this morning, have detected, at least, half a dozen of them, finding one or more in every branch, and often discovering the path, half an inch or more in length, which had undoubtedly been his "path of life," affording him food and shelter thus far in his maggot, or first form of existence. Two or three weeks later than this date, these maggots may be found considerably larger; but never, I think, attaining to more than three-eighths of an inch in length, and the size of a common pin; or possibly a little more. Later in the season I have often discovered their path, extending along an inch or more, through the central part of this fungus matter, and leading out at length, where we may suppose he found himself possessed of a pair of wings, and the power of using them.

Now for my speculations. The inquiry may

arise, are these fungi, or sores, thrown out as eruptions appear upon the surface of the human body, from disease in the sap, the blood of the tree? and thus affording a convenient place for the moth, or fly, in which to deposit its egg, become incidentally its birth place and cradle?

Or does the insect, the moth or fly, in the latter part of the season, insert its egg in the healthy bark, or soft wood of the summer's growth, to be hatched out the ensuing season, as the sap flows freely, and the warm sun is felt by it? This latter is, I am confident, the true view of the subject. But what is the cause of such an extensive "knot" or sore upon the limb? Certainly no such result follows a slight incision or wound made in the ordinary way. Is it not probable that Nature has prepared this insect, to propagate its kind, through this peculiar process? and accordingly by a law we cannot fully scan, made its sting, or the deposited egg, act upon the wood as a poison, throwing out just such an excrescence as is necessary to its existence? This is my opinion. And I think the vegetable world affords many examples analogous to this theory. Many a time, in my boyhood, have I plucked a certain forest weed in the pasture, or by the road side, growing perhaps to the height of three feet; the stock grown, and about as large as a pipe stem, and having, somewhere mid way of it, a ball or bulge, an inch in diameter, and perfectly sound. A careful examination of this ball, showed clearly that some insect had inserted an egg in the stock of the young weed, which caused the fibres to part in the centre, and swell out to the size above described, and containing within a pulpy substance, in the midst of which would be, at first, an egg, and then in due time a maggot, which feeds upon the tender juicy substance, Nature has so wonderfully provided for it. In Autumn these balls will be found to have, in the side of them, a small round hole, through which the imprisoned maggot makes his escape.

Similar to this are the round balls often seen attached to the leaves of the oak, and familiarly called "oak apples." They are composed of vegetable matter; their formation is a wonderful specimen of mechanical precision and skill; and yet they grow, or result from the insertion of the egg of a moth or fly, in the fibrous substance of the young and tender leaf. They form a perfect ball, the wall of which is in substance much like the leaf itself, while in the centre of the large chamber within, suspended by fine fibres, extending to the wall all round, is a small sack, or shell, in which at first is an egg, then a maggot, which finally escapes by crawling through the wall of its prison.

Now in these cases, certainly the hermit insect is the prime cause. She lays her egg, and Nature takes it into its fostering care; and though we cannot fully comprehend the subtle principles, by which the process is carried on, yet the facts cannot be disputed. Nature, in her beneficence, regards not man alone, but all living things. By laws the most subtle, by arrangements the most complete, as they often appear to us, yet really the most free and simple, are the wants of all supplied.

Possibly in some non-essentials in the above theory, I may have erred; I may not be correct as to the time when the egg is inserted; when it takes its wings and moves in the air. I have

none could fail to be satisfied of the superiority of the one and the impolicy of the other."

Mr. BARRY, in his "Fruit Garden," says, "No soil, whatever may be its original fertility, can sustain a heavy and continued vegetation for many years without becoming, to some extent exhausted. Indeed there are few people so fortunate, except those who settle upon new, uncultivated lands, as to procure a soil that does not need manuring to fit it for the first planting with trees." The very common practice in regard to the use of manure, is to apply none for several years, until the trees have begun to show signs of feebleness and exhaustion when large quantities are applied, thus inducing a rank and plethoric growth, that can scarcely fail to be seized with diseases. The proper way is to apply a small dressing of well decomposed material, like some of the composts recommended, every autumn." Instances have come under my own observation where trees have been planted by neighbors at the same time with like preparation and procured from the same source; by difference in after cultivation those of one have in the course of five years doubled in size those of the other which were planted in ground seeded down the second year from planting.

My own conviction, Mr. Editor, is, that to obtain the highest possible results from orcharding, the ground should be well prepared—enriched and constantly cultivated. In all published examples of the unusual yield of trees where the attendant circumstances are narrated—we find high culture proved to be an important and inducing cause. The following statement which I cut from a newspaper a short time since will illustrate:—"Mr. Moses Jones, of Brookline, near Boston, a most skillful cultivator, set 112 apple trees, two rods apart, and peach trees between both ways. The eighth year he had 228 barrels of apples, and in a few years from setting the trees \$400 worth of peaches in a single year; and the best part of the story is, that large crops of vegetables were raised upon the same land, nearly paying for the manure and labor. The tenth year from setting, many of the apple trees produced four or five barrels each." What effect this forcing, (if furnishing trees every element required to annually perfect large crops of fruit may be thus termed,) will have upon their longevity, I cannot speak from experience. I hope those of your correspondents in possession of facts on this subject will communicate them for the benefit of those less experienced. Will it not be better for the orchardist who seeks the largest profit from his investment, to pursue that course of culture which shall secure to him quick returns with annual dividends, even though it may be proved that trees thus highly cultivated may not endure so long as when the orchard is seeded down and the trees pretty much left to themselves. If by care and culture an orchard may be made to average one barrel of apples per tree, per annum for fifty years, and by a different course the same orchard shall endure for an hundred years and average but half a barrel, which think you, sir, would be the most useful and profitable mode?

A. G. HANFORD.

Waukesha, Wis., June 28, 1853.

TO PREVENT COWS FROM SHEDDING MILK.—*Colloidion* [Liquid onticle] is a somewhat recent discovery, and has been applied to useful purposes

by surgeons, but I am not aware that it has ever been used to prevent the loss of milk by leakage from the udder of the cow. The mode of applying is as follows: After milking, take a thin piece of muslin, the size of a three cent piece, wet it in the collodion and apply it quickly to the end of the teat. It dries immediately, and adhering firmly, prevents the escape of milk from the orifice. It can readily be removed at the next milking.

On first making use of this means I did not anticipate anything more than temporarily to prevent the evil. After making a few applications it was discontinued, and I was somewhat surprised to find that it had permanently lessened the fault. Upon reflection, the *modus operandi* appeared as follows: First, the collodion contracts the orifice and thus prevents the escape of milk; and second, the bag becoming distended, its capacity is permanently enlarged. Try it.

Another useful purpose of this article may be mentioned. Cows' teats often become tender from chaps and deep fissures in them. They may readily be cured by moistening a piece of muslin in this liquid and applying it smoothly to the parts affected. It adheres so firmly that it will not be loosened even if the calf is allowed to draw the milk.—*New York Agricultor.*

CIRCULATION OF SAP.

A clergyman of some distinction not long since commenced his Sabbath discourse as follows: "There are some things that I know I know, some things that I think I know, and some things that I know I do not know." We have often thought of this comprehensive sentence when we have read the philosophical explanation of some of our contemporaries, in regard to subjects which we are very much inclined to think might better be classed in the last division of subjects above given, while they speak as if with authority. One of our most judicious writers, who seldom mistakes the imagination for the actual perception, (the learned editor of the *New England Farmer*,) in a recent number says, "The sap is elevated (in the tree) in the same manner as oil rises in the wick of the lamp." We "do not know" that this is not true, but it seems to us safer and therefore wiser to give only as *hypothesis* what must be acknowledged so very far from absolute demonstration. Perhaps the elaborated sap descends "in the same manner," and perhaps too it does not. There are very serious difficulties attending any theory which has undertaken to provide for the circulation of fluids in vegetables. We have little doubt that it is the same system of influences which causes the entire circulation of vegetable juices, which first sets it in motion at the root. But we should be unwilling to assert any thing on this subject, as a matter of absolute truth, beyond the mere fact that their circulation is actually carried on.

Some recent investigations in Europe have been published, which are of considerable importance. They refer to the formation and propagation of cells, &c., and to the circulation of the sap. The former are too purely scientific, without much practical importance, to receive very general attention. The theory on the latter branch of the subject approaches the point of actual demonstration. The results arrived at are, that the nitrogenized elements, which are used by the plant, are

conveyed upwards from the root exclusively through the woody tissue of trees, while oxygen and carbon are absorbed and given out only by the leaf. As this process is essential to growth, the inference is inevitable that there can be no growth when there are no leaves. Whether this is in accordance with supposed facts, we are not so clear. The descending sap, after its preparation in the leaf, descends only in the bark, forming new layers on the outside of the wood already formed. Hence cutting a ring through the bark does not prevent the ascent of sap, nor its elaboration in the leaf, nor its descent until it encounters the ring. Here its progress is stayed. The result is a greater growth above the ring, more wood, and *more fruit*. Hence this may prove of practical benefit to the fruit-grower.

The excess of sap, or that portion which is not used up in new formations, enters the wood through the horizontal organs, and again ascends, thus making a constant circuit, as in animals. We cannot believe that capillary attraction does all this. —*Plough, Loom and Anvil*.

REMARKS.—Most of us assert that things are so, and so, when we have neither felt them nor seen them. Now we have never *clearly* seen the sap ascend in the plant, yet, from much reading, from long observation, and some investigation, we have become so thoroughly satisfied with this and other theories as to speak of them unqualifiedly as *facts*. At the same time we suppose the general apprehension is, with nearly all, as we have stated. Not that we *know* things as we assume to know when we repeat them under the solemnities of an oath, but use unqualified expressions with regard to things which all know it is not given to finite wisdom fully to comprehend.

We are glad to copy the whole article, that we may preserve the additional value which the writer has connected with our poor remarks.

HOEING CORN.

Some ask how many times it is best to hoe corn and other crops. The best answer to that question was given us a few days since by a farmer whom we had observed often at work in a field of corn in sight of our window. In going over the piece with him, and remarking the remarkable growth, we asked him how many times he usually hoed his corn. "Why," said he, "I do as I was brought up by my father to do. He never had any particular number of times, but hoed it all he could. I find it grows faster, and stands dry weather better, the oftener it is hoed." This is the true philosophy of culture; stir the ground. The direction for early and good crops, after the proper previous preparation, would be to stir the ground. Crops are like animals—they need petting and care. A friend was remarking to us one evening, the difference in the growth of melon vines in a neighbor's garden and in his own, side by side, of the same kind of soil and both rich, with the same kind of preparation for the seed, and the seed sown at the same time. The neighbor's melons were in blossom, while his own, he said, were but three or four inches in height. The difference has been produced by the constant la-

bor and care of the gardener in stirring the ground and regulating the amount of sun and shade, air and moisture they received.—*Hampshire Express*.

A RESIDENCE IN CHINA.

Settled down in the wilds of Kaffaria, away from libraries and books of reference, having no fear of "reviewers" to daunt him, but having a huge and weighty ennui to be cheated occasionally during the uncertain leisure of a tent life, Mr. Power, son of the incomparable and *unreplaceable* Power, turns over the old journals recording his nomadic life, and from their somewhat illegible pages he constructs a most readable and agreeable book.

Mr. Power has not only travelled, he has *lived* in the countries he visited; by which we mean that he not only *saw* them, but tried to realize their life; and his sketches, even when of merely slight externals are always vivid and suggestive. A few extracts will suffice to indicate the variety and amusement crowded into this single volume:—

A TETUAN CAID "RAISING THE WIND."

"He was by no means scrupulous in his mode of acquiring wealth, and regularly 'squeezed' every individual under his government. One ingenious plan of extorting a loan from an unwilling capitalist, was to tie his hands together, and introduce a couple of wild cats into the wide seat of his inexpressibles. This was a way of bringing them to the scratch, which never failed, and by degrees this excellent ruler grew to be enormously rich. The Emperor, thinking at last that his sponge must be full, sent for him to Fez, to have a grand squeeze.

"The wretched old victim was thrown into prison and soundly bastinadoed, a process which relieved him of some of his too plethoric wealth. Strips of cotton, dipped in turpentine, were tied round his fingers and toes, and lighted, which produced a grand haul. The wild cats continued for half an hour to produce revelations of fresh hoards. A knight templar or a Norman king could scarcely have been more ingenious in their financial experiments on a miserable Jew. Renewed tortures produced further discoveries of treasure, till the old man's last doubloon and last breath were yielded up together."

Mr. Power's estimate of the Chinese is by no means flattering: a cowardly, sensual, foolish set of barbarians, for whom no interest but that of curiosity can be excited.

THE VALUE OF AN OLD MAN IN CHINA.

"The reasonableness and placability of the natives were, on one occasion, evinced in rather a remarkable manner at Chusan, while I was there. An Englishman had come across some wild ducks in the canal inside the city, at which he fired with ball, all his shot having been previously expended. The bullet missed the birds, and glancing from the water, killed an old Chinaman, who was sitting at his own door, enjoying his pipe.

"The unfortunate sportsman, horrified at the result of his silly thoughtlessness, hurried away to take counsel with his friends, who recommended him to try to settle the matter with the relatives of the deceased, to prevent their complaint from being laid formally before the authorities, who would be obliged to award a heavy punishment for

such reckless carelessness. With this view one of his friends was dispatched to visit the family, to condole with them for their loss, and to explain how thoroughly it was the result of accident. He deplored the unhappy circumstance which had deprived the family of so valuable and so respectable a member, and pointed out the cheering fact that he was very old, and, in the natural course of things, could not have been expected to live much longer, and that pecuniary recompense should be made to console the family for the few months' society they might have anticipated enjoying with him. They admitted that he was old, very old, and as he could not have lived long, they mentioned a hundred dollars, as a sum likely to have a good effect in assuaging the bitterness of their affliction. The ambassador, delighted at hearing a demand so much more reasonable than he had anticipated, but concealing his satisfaction, pointed out that the deceased was so old that he could hardly have estimated his short remnant of existence at such a large sum; that he had died a very quiet and easy death, and that very likely he was wanted in the other world, so that the unlucky bullet might be esteemed a messenger despatched by the gods. He thought, therefore, that fifty dollars, to make a feast and burn plenty of joss-stick and paper money, would be sufficiently satisfactory to the spirit of their departed ancestor. The matter was finally settled to the satisfaction of all parties by the payment of seventy-five dollars; and I question whether one might not have shot two-thirds of the old boys of Ting-hae at the same reasonable rate, notwithstanding the veneration in which age is held."

ART IN CHINA.

"The drama in China is at a very low ebb. It is still in the strolling state: such as it might have been when Theopis and his company declaimed from a wagon, or rather, such as it was in the middle ages, when mysteries were performed in the open streets and squares for popular edification.

"A wealthy citizen, or, sometimes, the parish or municipality, hire a company of strollers, who erect their stage across a thoroughfare, with little respect for the public right of way. The entertainer and his friends occupy seats in front of the stage, and the tag-rag and bobtail stand in the rear.

"The actors are mere boys, who are dressed in robes of silk and satin, rich with embroidery, but much tarnished and rumpled.

"The subject of the play is usually taken from the life of some hero of mythology or history of China, and the plot is constructed with an attention to the unities of the drama that would have charmed a critic of the French school.

"The narrative begins with the earliest events of the hero's existence, carrying them on in uninterrupted dulness to his apotheosis. The play usually takes hours, and some of them, I have been informed, some days. The spouting and posturing are varied by recitative singing in a shrill contralto key; and every scene begins and ends with banging of gongs and squealing of pipes, occasionally varied by the exolusion of crackers, when the interest becomes thrilling, and some great event is enveloped in the noise and smoke, being left, in other respects, to the imagination of the audience."

"There are some dramas which treat of the loves of the heroes, in which little is left to the imagination, although the dialogue is carried on in a lofty rant which never descends to comedy, much less to farce. With such taste, it is not surprising that this species of amusement is not in much repute, and that its professors should be classed with the mountebanks and vagabonds, to whose ranks they properly belong.

"There are no moral lessons to be learnt from the Chinese drama: it inculcates no good principles, nor does it hold the mirror up to nature. Buffoonery, coarse ribaldry, and exaggerated passion, are its chief characteristics; one cannot wonder at the low esteem in which it is held.

"Music is not more advanced. All the singing is in an unnatural falsetto key, pitched as high as possible, so that anything more hideous and ludicrous than the sounds produced can scarcely be imagined. A tom cat caterwauling on the pantiles is the nearest approach I know to the vocal music of this refined nation. They frequently accompany the voice with a kind of violin, the scraping of which is sufficient to put one's teeth on edge. A lute with wire strings and a very wiry tone is sometimes used for the same purpose. The instrument, however, that is to be heard on all occasions, is a sort of pipe, very much resembling the bagpipe in tone.

"The songs I have heard were all of very similar character, and were sung in short cadences, alternating with the symphony, reminding me very much of the Spanish seguidilla, as it is heard screeched by the muleteers in the mountain paths of Andalusia; only that while the muleteer screeches, the Chinaman howls in a way that would excite the sympathy of a whole kennel of hounds, compelling them to join in an obligato chorus.

"Chinese poetry is on a par with the music. It either delights in namby-pamby sentimentality, or puerile conceits. Graceful metaphor, subtle allegory, warmth of sentiment, a picturesque feeling for the beauties of nature, are all utterly unknown; while plays-upon-words, and a studied arrangement of phrases, delight the most fastidious critics, and satisfy their tastes."—*London Leader*.

For the New England Farmer.

STATE REFORM SCHOOL.

DEAR SIR:—The remarks in your paper of late, in relation to the Farm School in this place have astounded us all. We had supposed it to be a star of first magnitude in the constellation of the charities of Massachusetts. We were aware that little had been done to increase the products of the farm, but attributed this to the spending of labor in more permanent improvements. It had not occurred to us to suppose any want of care as to the personal condition of the boys; or any defect in the system of instruction pursued.

While the lamented DENNY lived, we knew his welfare was a prominent object of his attention, and judging from the report annually published, we had supposed the same vigilant supervision had constantly been exercised. We knew that the late superintendent had been confident in his own opinions—but we supposed this confidence had arisen from his long experience and not from any disposition to resist improvements suggested by

others. It will be a subject of deep regret, if any permanent reproach shall be cast upon the institution, by recent examinations, and still deeper if any radical defects shall be found to exist. If any such do exist, the sooner they are corrected the better. No good reason can be given, why the farm and the institution, shall not be made models worthy of imitation in every State of the Union. When the venerable farmer PETERS owned the place, it was looked upon as one of the best farms in the county of Worcester.

Westboro', June 20, 1853.

INSECT DESTRUCTIVE TO THE APPLE.

The following article which we find in the *Transcript* is timely and appropriate, and we give it in connection with a letter on the preceding page from Professor HARRIS.

NOTES FROM THE MEMORANDUM-BOOK OF H. M. SIMPSON, OF SAXONVILLE.

June 18th, 1853.—Noticed a new worm upon the apple, cherry, and plum trees, that eats the leaves and fruit. They are upon all the trees of these kinds in the garden.

June 19th.—The worm before noticed, which is to me entirely new, is very destructive; it eats the tender shoots and also the fruit. The egg of the perfect insect must be deposited on the end of the shoot as it is growing, and between two apples, if they chance to touch each other; also, between two leaves. If all the worms go through their transformations, there must be swarms enough to destroy the trees in the next generation. This little new comer will require looking after. By jarring the trees, they spin a fine fibre towards the ground, suspending themselves by it, and then again ascend, to commit depredations upon the leaves and fruit. Deposited three of the larvæ with an apple under glass to note their habits and changes. They may be known by three longitudinal stripes on the back; the one in the centre more faint than the other two. They have a buff colored, heart-shaped head, and are naked; have six fore, true legs, and eight fleshy projections, with distinct prop-legs.

June 23d.—The larvæ deposited on the 19th have changed to chrysalides. It is very remarkable that this insect is pervading the State and also the adjoining States. Almost every person I meet, who lives in the country, has noticed them. Many persons suppose it to be the canker worm, but this is a mistake. The canker worm belongs to a family called Geometers, or earth measurers, that creep, with the habit of forming a loop in the back, by extending the fore part of the body and then drawing up the centre in the shape of a loop. This insect creeps like the common caterpillar, and has a remarkable habit of springing backwards when taken in the hand. They do not spin a cocoon, nor any tissue of silk for protection, while going through their chrysalid state. Their length is about five-eighths of an inch.

July 6th.—The chrysalides have opened, and the perfect insect proves to be a little moth, with wings of a dark bronze, wavy, changeable appearance. When at rest, they have one scollop at the termination, and are very slender and long in proportion to their breadth; have two feathery projections at the head, with long antennæ, and have

a regular taper from the end of the wing to the head. The abdomen is like a delicate, light colored satin, the legs nearly the same, and the insect presents a beautiful appearance under the microscope. They deposit their eggs separately, and do not live in society on the trees, as many of the Caterpillar tribe, but solitary; each one looking out for himself. When at rest, the fore legs elevate the head and thorax, presenting an angle from the ends of the wings to the head, of about thirty degrees. These insects, it is to be hoped, may disappear as suddenly as they have come upon us; if however, they remain, their number must be legion, as already we have had two generations this season.

They may be destroyed by syringing the trees with whale oil soap, when the worm is first hatched; also by placing a sheet under the tree, and jarring it, when those that fall upon the cloth can be easily destroyed, as well as those which suspend themselves by the silken thread which they spin. I suppose the egg to be laid about the first of June. They extend their wings about seven-eighths of an inch.

SALERATUS.

Saleratus is said to be injurious to the human system, and that it destroys thousands of children and some adults every year. In New Brunswick, contiguous to Maine, the physicians are wont to say that half the children are killed by the use of saleratus. The evil is fast spreading throughout the Union. Families of moderate size already use from ten to twenty-five pounds yearly.

REMARKS.—Storekeepers who have been engaged in the business for many years, have told us, that formerly they used to purchase three or four small kegs of saleratus for a year's supply in a country village, but that now they purchase more than as many large casks, weighing some six or eight hundred pounds each. Large quantities are used in making bread, the most common food, and of which all partake. Milk should take its place there. Many persons are in the habit of adding a little saleratus to most kinds of pastry. We are inclined to believe the remarks quoted above have much truth in them. We do not know how far the power of saleratus may be neutralized by a mixture of other substances used as food, but it may be known by the chemist, and should be explained to the people.

For the New England Farmer.

FERRY'S PATENT CROSS-CUT FEED CUTTER.

MR. EDITOR:—Your correspondent from Brattleboro', Mr. Holbrook, says, "farmers are very much in want of a powerful effective chaff-cutter, which shall take in a generous mouthful of corn-stalks," &c. I have long felt the need of an improvement in machines for feed cutting; and first I would say they should be so constructed that all stiff stem hay or straw, may be cut at least four inches long; this will induce the animal more effectually to masticate it, thereby giving more nourishment to his feed, and will not be as likely to

injure the passage to the stomach, as when fed on very short hay or straw.

In answer to your correspondent I would say, I think a machine "with a fly wheel, and taking in a generous mouthful, cannot be worked with ease by one man." I intend to manufacture for delivery in October, a machine with a cross-cut motion, cheap, simple, and one that will cut through a sheaf at every stroke of the knife.

L. FERRY.

East Hampton, June 18, 1853.

MUCH LABOR ON LITTLE LAND.

The *Farmer's Companion*, in an article on Small Farms, marks out the following course for the farmer of small capital to pursue:

You have 100 acres clear, 50 of which you keep as pasture and for meadow. Make up your mind to work only 25 acres; the other 25 being put down to clover and timothy, as you best can. You have manure enough in and about your farm for six acres. This year, haul that on to your land, plow it and put in corn; with a little ashes, and, if you can get it, slaked lime or plaster to every hill.—Plow twice as deep as usual; and drag twice as long, with a long-toothed drag, till the land is like a garden. If you have got 35 bushels of corn to the acre before, we can warrant you now 70 or 80; for you cultivate and hoe the corn twice as much likewise. You double your crop at a very little increased cost. Having no more manure, you must depend on deeper plowing and better dragging for the other 10 acres for this year; not forgetting to sow a little more seed than usual, if it is oats or barley. In the fall, sow wheat where the corn was, with the same care; and next spring, manure the next six acres for corn. Yes, but you may manure 10 or 12 acres; for you have had 25 more acres for hay, or oat straw cut green for fodder, and can keep 25 more cows through the winter; and knowing the value of the manure—that it is as important to you as the very soil itself—you will take much better care of it.

Thus, every two or three years, all your land will get a dressing of manure, and every year you will have a different crop on it. Every year it will improve, and you grow rich, with about half your work. But after a while sow a few acres of this land with clover and timothy, and break up as much of your old grass. You will get doubly the crop of hay on the new piece, and a good crop of grain on the old piece. In one word, of all men in the world, a small farmer should work a small piece of land; work it thoroughly well; keep all the stock he can to make manure; keep the manure dry, and he will not be a small farmer long. We have tried it and we know it. For the rest, take and read a good farmers' newspaper.

WAR.

All wars are demoralizing and ruinously expensive,—they blunt the feelings, repress the sentiments of love and mercy, and turn men into hunters of each other more furious than the beasts of prey.

Standing armies, the great provocatives of war, should not be allowed in times of peace. Let those in power so govern as to gain the hearts of the

people, and in those hearts they will find the nation's bulwark of safety when dangers threaten. With these willing hearts, and their energetic hands, the raw materials of the mine and the forest would be transformed into engines of destruction, or arks of safety, with more wonderful rapidity than any of the transmutations wrought by the magic influence of Aladdin's lamp. Gnarled oaks, pigs of iron, and bars of copper, fields of hemp, and rivulets of turpentine, would be changed, swifter than vision of alchemist of old ever saw, into the means of aggression or defence.

Those hearts, stimulated by the spirit of liberty, by a love of country, of home and our institutions, would be stouter than the ribs of oak and iron themselves, and unconquerable, so long as their cause is just.

EXTRACTS AND REPLIES.

Mr. GEORGE J. COLBY, of *Janesville, Vt.*, inquires:—"Why could not the price of the Osier Willow be quoted with other products of the farm. I think there are many engaging in the business that would like to see the prices of the imported and American article.

If there are any of your correspondents engaged in the cultivation of the willow, I wish they would tell us with what success."

Mr. T. C. BRANCH, of *Cornwall, Vt.*, in reply to the inquiries of S. G. B. in a late number of the *Farmer*, says that the bottom of the post may be framed into a sill or a pin inserted in it which will prevent its being raised by the frost. He would cut alder bushes after they are done growing; has seldom known them to sprout when so cut.

Mr. HORACE H. WINCHESTER, of *Marlboro', Vt.*, says that cows afflicted with garget may be cured by a few doses of the root called garget.

This remedy has been often mentioned in the *Farmer*, and is probably used to some extent throughout New England; but it very often fails to perform the cure.

"J. D.," *East Barnard, Vt.*, says the best way to set posts to prevent the frost from throwing them, is to dig a hole 2 feet deep, 18 or 20 inches across, and fill up within 6 or 7 inches of the top with small stones, then drive tight with the head of an iron bar, then fill the remainder with tan bark. He would cut alder bushes in the latter part of August.

Another writer, "S. W.," agrees with "J. D.," that the earth must not come in contact with the posts. He says "alders should be cut in winter when the ground is frozen, and they will die with a very little sprouting. I have long been used to them, have cut them in the full of the moon, in August, and at various other times, and care not whether the sign is in the head or heart, they will sprout unless cut as above stated."

THE BLACK TARTAREAN CHERRY.

This was formerly called the *Double Heart*, in New England, and has also been known by several other names, such as *Circassian Cherry*, *Black Russian*, *Fraser's Black Heart*, &c. The fruit is very large; heart-shaped; skin glossy, purplish black; flesh purple, half tender, juicy, with a rich pleasant flavor; stone small. Ripens, generally, from June 23 to July 4. Mr. ROBERT B. FLUSHING, L. I., a successful fruit grower, gave an account of this cherry in the *American Agriculturist* in 1845.

He says the variety is supposed to have originated in Spain, whence it was transmitted to Russia, and was carried from the last named country to England by Mr. John Fraser. In the account given of it in the "*Pomona Londinensis*," it is stated to have been introduced into Britain from Circassia, by Mr. John Ronalds, of Brentford, in 1794. It is distinguished for its large, obtuse-heart-shaped, shining purplish black fruit, with an uneven surface, containing a rich, juicy, tender, purplish flesh, and differs from many other varieties in hanging in clusters, which usually occurs early in July, it readily commands in market, double the price of the ordinary kinds.

This tree is valuable also, not only for its fruit alone, but from its vigorous growth, spreading branches, and symmetrical form, it is well adapted for the purposes of ornament, and is well worthy of general cultivation, Downing and Cole, supposed it to be of Russian origin.

HOW THE WATER BOILED AWAY FROM THE POTATOES.

BY J. B. NEWMAN, M. D.

I am residing for the summer with my family in a retired and very romantic place in Connecticut, seven miles from a railroad depot, and some thirty in all from New York city. The distance from the depot makes the weather an object of some consideration in visiting the city. Yesterday was a fine clear day, pleasant for either walking or riding, there being sufficient breeze to moderate to comfort the heat of the sun. Quite exhilarated by these circumstances, I declared at dinner my determination to go early the next morning to New York, as it was just the weather for travelling.

"You cannot go to-morrow," said my aunt gravely; "it is going to rain."

"I see no signs of it," said my wife; "wind like this often continues for days together without any storm."

"I do not judge from the wind, but from a sign that never fails, and that is, the boiling entirely away of the water from the potatoes this morning."

"Did you put in as much water as usual?"

"About the same. You laugh, I see; but it will rain to-morrow in spite of your laughing."

Incredulity did make us merry, and each one began to recount tales of country superstitions generally. In the course of the conversation, some one told a story of an English gentleman, well known in the scientific world, who, while on a visit to a friend, started one morning on a hunting expedition, but missed his way, and inquired of a lad tending sheep to direct him. The boy showed the desired path, but told him it would rain shortly, and he had better return home as soon as possi-

ble. The gentleman, observing no signs of the predicted storm, ridiculed the boy's notions, and proceeded. In the course of two hours, however, he was retracing his steps completely drenched, and found the boy eating his dinner in a little hut near where he had left him. Curiosity as to the source of the knowledge which he had found thus verified prevailed over his desire for speedy shelter, and he stopped his horse, and offered the boy a guinea to enlighten him on this point. The boy took the guinea, and pointed to the closed flowers of the Scarlet Pimpernel, some plants of which happened to be growing near the hut. The gentleman himself had written about this very fact, mentioning that its open buds betokened fair weather and its closed flowers abundance of rain, and hence its title to its common name of Shepherd's Weather-Glass. Fully satisfied, he rode on.

We all allowed that there was some sense in this sign, and that it could be ascribed to the instinct with which nature endowed her children, to guard them from injury.

"But are there not," said my aunt, "some contrivances made to foretell rain? I have seen a long glass tube filled with quicksilver, to which there was a dial-plate attached, and the rise and fall of the quicksilver regulated the hand on the dial, so that changes of weather could be told. I do not see why the boiling away of the water from the potatoes may not be as good a sign as the rise and fall of the quicksilver."

Again there was a laugh at the comparison of the water around the potatoes with the handsomely-finished and expensive philosophical instrument termed a barometer.

The weather continued as pleasant as before, so last evening I packed up my carpet-bag, and made the necessary preparations, requesting them to wake me at five o'clock, and have the carriage ready in time to convey me to the depot.

I awoke this morning, and all was still in the house. Quite pleased to be beforehand with them, I looked at my watch, and with some difficulty, on account of the dim light, found it to be fifteen minutes after six. Much surprised at not having been called, I jumped up, and threw open one of the blinds of the window, but directly closed it again, as a driving rain poured in. The reason why I had been permitted to sleep on was evident enough. I dressed, and went down to the breakfast-table, where sat Aunt H. enjoying her triumph.

On my return to my study, forced as it were by circumstances to do so, I began to reflect on the boiling away of the water from the potatoes, and tried to discover whether the ensuing rain was mere coincidence, or due in some way to cause and effect; whether in reality connected with it or not. The result of my deliberations and subsequent conviction of the connection of the phenomenon with rain I will now proceed to give.

The pressure of the atmosphere, which is about fifteen pounds to the square inch, forces many substances to retain the liquid condition that would, were that pressure removed, assume the form of gases. Of this, ether is an example.

Chemistry assumes that all matter is made up of exceedingly small particles called atoms, and that around every atom there are two atmospheres, the inner one of attraction and the outer one of

repulsion. Bodies exist in three forms, as solids, liquids, and gases. When the attractive force predominates, the form is a solid; when the attractive and repulsive forces are balanced, the form is a gas. Caloric, or the principle of heat, is considered by many, and perhaps rightly so, as synonymous with the repulsive force. Hence an increase of heat will make the solid become fluid, and the fluid become gaseous. Thus ice changes to water, and water to steam.

The atmosphere, by its pressure, assists the attractive force in the same manner that heat assists the repulsive, the pressure and heat, of course, acting in opposite ways. Whatever, then, would lessen the amount of pressure, would enable the heat to act more powerfully. A certain amount of heat, under the ordinary pressure of the atmosphere, is required to convert water into steam. The less the pressure, the less the heat required; but if the same amount of heat is applied to the same quantity of water, under such circumstances, the more rapidly will it be evaporated, or, in other words, boiled away. It is evident, enough, then, that if the atmospheric pressure is less at times preceding rain, the water will boil away more rapidly than usual from the potatoes.

I was frequently puzzled in my boyish days by the assertion in scientific books, that the air is lighter in rainy than it is in dry weather. It seemed to me as if the air at such times should be heavier, as, in addition to its own substance, it holds suspended abundance of heavy clouds, which must surely increase its weight. For many years the problem remained unsolved in my own mind, as it is yet unsolved, perhaps, in the minds of many who read this. At last the thought occurred to me, that as the weight of the air *per se* must remain the same at all times, taking it as a whole, did it not really contain more moisture in solution in clear than in rainy weather? And such is really the fact. As water, by the addition of salt, can be made dense enough to float an egg, and as the more the brine is diluted with fresh water, the deeper will the egg sink in it; so is the air, by holding water in solution, rendered dense enough to float clouds at a great height, and the greater the amount of water it loses, the lower do the clouds fall. This very dryness of the air is, in fact, one of the many circumstances that cause rain.

The air then is lighter, the pressure consequently less, and the unusually rapid evaporation of water from the potato-pot is as good and trustworthy a sign of approaching rain as the falling of the mercury in the barometer; and thus the cook in the kitchen may foretell as confidently as the natural philosopher in his cabinet. And yet more, for nature is bountiful: even where the apparatus of the kitchen and the cabinet are denied, she furnishes, without expense to her faithful observers, means even more certain; for the shepherd boy has an unerring guide in the Scarlet Pimpernel.—*Plow, Loom and Anvil.*

The Australian Movement.—The London correspondent of the *Philadelphia North American* states that emigration to the Australian colonies has almost entirely ceased, but shipments continue active. The vessels now in the port of London under despatch to the colonies amount in number to 78, and in tonnage 44,667 tons. Freightage is much lower.

PROSPECTS OF THE SEASON.

The drought in all this region continues severe. The *hay crop* on old grounds will be very light; on rather low and moist lands better than last year. Although the present crop is more abundant than last years, there will not probably be more hay in the barn in September, as the high prices since that time have drawn it all out. There is, however, much less stock than there was last year at this time, so that upon the whole, hay will not command a higher price than it brought last year.

Corn has had a fine color from its first appearance and now looks well, and unless on quite dry lands has not yet suffered much.

The *rye crop* is good; *oats* light and *barley* good.

Some fields of the *blue stem wheat*, which we have recently seen are very fine.

Potatoes are suffering; no rains having penetrated to the roots since they were planted.

The *root crops*, unless those sowed quite early, are not promising.

The *cabbage crop* has been extensively injured by the cut worm, in addition to the little imp that usually makes a home in the root.

Vines, such as the various squashes, melons and cucumbers are not looking fresh and vigorous.—They have had to contend with armies of insects as well as drought.

The *apple crop* must be unusually light. One gentleman who usually puts up a hundred barrels has sold his whole crop, whatever it may be, for ten dollars.

On the whole, there is no good cause for despondency. Earnest hearts and hands and economical habits will bring all out right. The Giver of sunshine and rain deals gently and kindly with us in this garden of the world, and home of the oppressed. We shall have enough and to spare.

COMMUNICATION OF IDEAS AMONG CATTLE.

There is a large shallow inlet on the Prussian shore known as the Frische Haff, crossed for the first time by steamers ten or twelve years ago. Upon their way the vessels paddle by a common near the Elbing river, upon which the towns-people turn cattle out to graze. When the first steamers passed this common they caused every flank of beef to quake; such fiends in dragon shape had never appeared before to try the nerves of any cow, or to excite wrath in the bully bosom of the experienced among the warriors of the herd. With tails erect, therefore, and heads bent down, the whole colony upon the common charged over dykes and ditches inland, roaring horribly. Every appearance of the steamer, to the great joy of the crew, caused a panic and a scattering of oxen, until after a few days, the animals had become hardened to the sight, and took it as a thing of course, and meant no harm to them. Now, all the horned beasts on the common during that first year were in the usual way placed there to be fatted. In the

following spring they had gone the way of beef, and their place was filled by a new generation altogether. So soon, therefore, as the Haff was clear of ice, and the steamers again began to ply daily upon the route between Elbing and Königsberg, the sailors were on the alert again to witness the old scene of uproar by the water side. But they were disappointed. Though there was the pasture grounds well stocked with new recruits for the market, who had come from distant island farms or out of stalls within the town, though scarcely one of them—if any one—had ever seen the apparition of a steamboat, not a cow flinched. The members of the whole herd went on grazing or stared imperturbably at the phenomenon. It was a new thing no doubt for them to see—but they had already been told of it. Every spring the first passing of the steamer is in this way regarded by a fresh generation on the common with complete indifference. The experience acquired by its forefathers ten or twelve years ago seems to be now added to the knowledge of every calf, born in any corner of our province. And yet, in what way have these calves been educated? or, if this fact has been taught to them at all, what else may they not know!—*Dickens' Household Words.*

For the New England Farmer.

MANURE FOR LAYING DOWN GRASS LANDS.

DEAR SIR:—I have several acres of land which I wish to bring into grass for another year, by turning over, top-dressing and seeding the present season. The soil is a sandy loam, not poor at all, but in common parlance good, though considerably run out.

What article will be the most profitable for me to use, considering expense, time, labor and amount of crop? Please answer. (a.)

I have seen oyster shell lime advertised as an article desirable to use for such purposes. Please inform me how much should be used to the acre? and what kind of soil it best suits? (b.)

Muriate of lime, I also notice. What is the expense per hundred lbs? and how much per acre? (c.)

How is guano for similar purposes. What quantity and expense to the acre?

Any information on these subjects will be thankfully received by your friend and subscriber.

L. W. DAGGETT.

Attleboro'-Falls, July 4, 1853.

REMARKS.—(a.) If near your barn, good composted barn cellar manure.

If not near the barn, Peruvian guano, 300 pounds to the acre, worked in two or three inches with the cultivator after plowing and before sowing the seed.

(b.) The oyster shell lime would scarcely be misapplied on any of our lands that have been frequently cropped. The quantity of pure lime contained in the crops produced upon one acre, according to Prof. Johnston, during a four years' rotation, amounts, on an average, to 242 pounds, which are equal to about 430 pounds of carbonate of lime, in the state of marl, shell, sand or limestone grav-

el. Two three and sometimes four hundred bushels are applied to the acre in England, but we think it a better plan to begin with a smaller quantity, say from 10 to 25 or 50 bushels to the acre. The tendency of lime is to stiffen very loose soils and open the stiffen clays.

(c.) Five or six barrels of the muriate of lime to the acre. Price \$1.50 per barrel.

For the New England Farmer.

PRESERVING TIMBER.

Copperas Hill, Vt., July 9, 1853.

MR. A. D. HAGER:—Dear Sir,—I notice in the *New England Farmer*, your inquiries respecting "Kyanizing timber." I can inform you, that our timber which has been saturated with copperas and exposed to all weather for forty years, is perfectly sound and hard, and has become something of the nature of stone.

Timber that has been soaked in copperas water, say one pound copperas to one pail of water, will last more than twice as long as that which has not been thus prepared.

Yours truly,

JOHN REYNOLDS, Agent

Vermont Copperas Company.

N. B. Copperas is cheap, 1½ cents per pound.

Proctorsville, Vt., July 12, 1853.

FRIEND BROWN:—I received the above in answer to my inquiry in the *New England Farmer*, and although from a stranger, I take the liberty of sending it to you, as the facts may be thought of sufficient importance to claim a place in that bundle of valuable facts—the *New England Farmer*.

Respectfully yours, A. D. HAGER.

THE FABLE OF THE RAIN DROP.

There was once a farmer who had a large field of corn; he ploughed it and planted the corn, and harrowed it and weeded it with great care, and on his field he depended for the support of his family. But after he had worked hard, he saw the corn begin to wither and droop for want of rain, and he thought he should lose his crop. He felt very sad, and went out every day to look at his corn, and see if there was any hope of rain.

One day, as he stood there looking at the sky, and almost in despair, two little rain drops up in the clouds over his head saw him, and one said to the other.

"Look at that poor farmer; I feel sorry for him; he has taken so much pains with his field of corn, and now it is all drying up; I wish I could do him some good."

"Yes," said the other, "but you are only a little rain drop, what can you do? You can't even wet one hillock."

"Well," said the first, "to be sure I can't do much, but I can cheer the farmer a little at any rate, and I am resolved to do my best. I'll try. I'll go to the field to show my good will, if I can do no more: so, here I go." And down went the rain drop, and came pat on the farmer's nose, and then fell on one stalk of corn. "Dear me," said the farmer putting his finger to his nose, "what's that? A rain drop. Where did that come from? I do believe we shall have a shower."

The first rain drop had no sooner started for the field, than the second one said, "Well, if you are going, I believe I will go too, so here I come;" and down dropped the rain drop on another stalk.

By this time a great many rain-drops had come together to hear what their companions were talking about, and when they heard them, and saw them going to cheer the farmer and water the corn, one said, "If you're going on such a good errand, I'll go too;" and down he came. "And I," said another, "and I," "and I," and so on, till a whole shower of them came, and the corn was watered, and it grew and ripened, all because the first little rain-drop determined to do *what it could*.

Never be discouraged, children, because you can't do much. Do what you can. Angels can do no more.—*Anonymous*.

AGRICULTURE IN FRANCE.

A letter writer for *The Republic* says a trip of six hundred and fifty miles, from the northern to the southern extremity of France justifies me in the expression of my opinion that God's sun does not elsewhere shed its rays on so fair a land, or one so thoroughly cultivated.

The whole country is literally a garden. Every square foot, from the mountain top to the lowest ravine, is made to produce something, if it be susceptible of it. Their mode of planting or sowing their crops whether on plain or hill side, produces the finest effect on the appearance of the landscape; the allotted space for each crop is laid out in squares or parallelograms with mathematical precision, and whether large or small, the best garden could not be divided with greater accuracy.

As there are no fences or hedges, and as the different crops are in various stages of maturity you can imagine the variety of hues that meet the eye, and the magnificence of the panorama that stretches out in every direction as far as the vision can penetrate. I am sorry to add in this connection that seven-eighths of the labor is performed by females, while two or three hundred thousand stalwart men are idling away their time in the barracks in the cities and villages.

In the absence of fences, cattle secured by ropes are driven about their pasturage by females, and sheep are confined within the required limits by boys, assisted by a shepherd's dog. Speaking of cattle reminds me that notwithstanding fresh pork is abundant enough in market, both in England and France, I have not seen a live porker in either country.

EXCERPTS.—Every plant that is produced, every child that is born, is a new idea, a fresh expression of the wisdom and goodness of our Creator.

Revenge reaps no reward. It is its own most fearful punishment. Its thirst is death. Deeds of horror are its luxuries.

Custom will have the same effect, with respect to death, as to other frightful things; it will take off its terror.

The noblest remedy for injuries is oblivion. Light injuries are made lighter by not regarding them.

No poultice has ever been discovered to draw out man's virtues so fully as the sod that covers his grave.

For the New England Farmer.

SETTING POSTS.

MR. EDITOR:—On page 303 of *New England Farmer*, monthly, is an inquiry for the best way of setting posts and manner of building front fence, by S. G. B.

A very durable, and not very expensive way, is to take flat pieces of granite of sufficient size and weight, and in the centre of these, drill a round hole 3 inches deep; then take a piece of round iron 20 inches long, and wedge it fast into the hole you have drilled; place the surface of the granite an inch higher than the surface of the ground. Then take a post about 3½ feet long, and in one end of it bore an inch auger hole the length of the iron, 17 inches, and drive on the iron. This makes a very durable post, not moved by frost. After setting the posts the desired length of the fence, placing the posts about 8 feet apart, you can saw into your posts near the bottom, and nail on a joist 2 by 4, and on the top another; to these you can nail your pickets, or you can build with small rails without pickets.

Another way is, and it may not be more expensive where lumber is high, take round iron, same as above, the height you wish to build the fence, sharpen the top as rounds are turned for fence, and on these put two rails lengthwise, one near the bottom, and the other near the top, bored with holes the proper distance for rounds, with an inch auger. This painted, makes a very durable and neat fence for front yards. E. G. C.

Canaan, Me., 1853.

CANADA THISTLES.

MR. TAPPAN, in the *Plow, Loom and Anvil*, says that Canada Thistles can be killed by deep and thorough plowing. Or they may be killed by mowing them when they have attained to their full size. He says then the stalks are hollow; the blossoms are red—not much faded; the lower leaves are dead; and the weather warm and dry.

J. H., in the *Rural New-Yorker*, plants his corn on the thistle ground, and after the corn is hoed the last time passes through with a spade and takes out every thistle, root and branch, shakes off the earth, and leaves the thistle on the ground, where the first few hour's sun kills it. This process he follows up for a week or ten days, and the work is thoroughly accomplished.

GOOD TOOLS FOR THE BOYS.

The editor of the *Portland Pleasure Boat* gives the public some excellent practical advice. In an article in which he furnishes some hints in regard to making agriculture a cheerful and agreeable occupation, he closes the subjects thus:

Farmers, furnish your young boys with light, neat and good tools, and teach them how to keep them in good order, if you would have them love agriculture, and give them a little lot for their own use.

If you wish to discourage them and drive them off to the city, to sea, or to California, give them rusty hoes, broken shovels, dull scythes, &c., to work with, and not allow them to plant a seed or

a tree for themselves. Every boy on a farm should be allowed a lot on which to make a miniature farm. He may have a row of corn, a row of potatoes, a patch of wheat, oats, beans, grass, and if you keep animals give him a calf, a colt, or a lamb to raise.

With the products of his little farm he can supply himself with books, clothes, &c., so that you will be gainers by being liberal, and will encourage industry and beget a love for agriculture in your sons, which will in future years lead them on to perfection in the art, and place them among the highest of nature's noblemen.

LIME FROM GAS WORKS.

MR. BROWN:—Please inform me in your usual way, of the principal qualities, and relative value of the refuse lime of gas factories, when the gas is obtained from bituminous coal, and best time and mode of applying it as manure.

Yours, respectfully, T. H. C.
Locust Lawn, Indiana, 1853.

LIME FROM GAS WORKS.

GENTLEMEN:—A subscriber to your useful *New England Farmer* solicits the inquiry respecting the lime used at the gas works, for the purpose of purifying the rosin and extracting the ammonia. It is very powerful, and retains a peculiar, strong smell. Can it be used for agricultural purposes? It is very cheap, 25 cents a barrel. Will it answer for decomposing peat—earth, or muck. I have heard of its being used in Essex county, but have not seen notice of it in any paper.

Yours, respectfully, H. S.
Portsmouth, June, 1853.

REMARKS.—Will some of our correspondents reply to these letters of inquiry?

Boy's Department.

DUTIES AT SCHOOL.

Quintilian includes most all the duties of scholars in this one piece of advice which he gives them—to love those who teach them as they love the science which they learn of their instructors, and to look upon their teacher as fathers, from whom they derive not the life of the body, but that instruction which is in a manner the life of the soul. If they possess this sentiment of affection and respect, it suffices to make them apt to learn during the time of their studies, and full of gratitude all the rest of their lives. Docility, which consists in submitting to the directions given to them, in readily receiving the instruction of their master, and in reducing them to practice, is as properly the virtue of scholars as that of masters is to teach well. The one can do nothing without the other, as it is not sufficient for a laborer to sow the seed unless the earth, after having opened her bosom to receive it, encourage its growth by warmth and moisture; so the whole fruit of instruction depends upon a good correspondence between the master and scholar. Gratitude for those who have labored in our education is the characteristic of an honest man and the tribute of a good heart. "Who is there amongst

us," says Cicero "that has been instructed with any care, that is not highly delighted with the sight, or even the bare remembrance of his preceptors, masters, and the place where he was taught and brought up?" Seneca exhorts young men to preserve always a greater respect for the masters, to whose care they are indebted for the amendment of their faults, and for having imbibed sentiments of honor and prosperity. The exactness and severity of our teachers may displease sometimes at an age when we are not in a condition to judge of the obligation we owe them; but when years have ripened our understanding and judgment, we discern that their admonitions, and a severe exactness in restraining the passions of an imprudent and inconsiderate age, are the very things which should make us esteem and love them. Thus Marcus Aurelius, one of the wisest and most illustrious Emperors that Rome ever had, thanked heaven for two things especially—for his having had excellent tutors himself, and that he had found the like for his children. The duties of school-boys consist in docility and obedience, respect for their masters, zeal for study, and a thirst after the sciences, joined to an abhorrence of vice and irregularity, together with a sincere and fervent desire of pleasing God and referring all their actions to him.

A PROMISE.—A promise should be given with caution and kept with care. A promise should be made by the heart and remembered by the head. A promise is the offspring of the intention, and should be nurtured by recollection. A promise and its performance should, like the scales of a true balance, always present a mutual adjustment. A promise delayed is justice deferred. A promise neglected is an untruth told. A promise attended to is a debt settled.

Ladies' Department.

AN ENGLISH WOMAN'S OPINION OF HUSBANDS.—As a general rule, we know that men have, by nature, a superiority in strength which enables them to go through labors and dangers, mental as well as bodily, from which females should be exempt; and that by education they are qualified for exercising the several trades or professions by which they are to maintain their families. On the other hand, women are endowed (besides all the graces and amiabilities of the sex) with a great superiority of quickness, tact, and delicate discernment, in all the every-day affairs of life. In all these, therefore, the husband ought to be completely guided by his wife. And this shows the wisdom of our ancestors in making the husband "endow with all his worldly goods" the wife he has chosen. The wife is dependent on the husband, and clings to him for support, just as a hop-plant climbs on its pole, and a sweet pea on the stick to support it, and as the vine in Italy was, according to the language of the poets, "married to an elm." But if you could only conceive a hop-pole, or a pea-stick, or an elm, imagining that those plants were put there on purpose for its adornment, you would tell them that this was quite a mistake; that the climbers are cultivated for the flowers or fruit; and that the stakes are placed there merely for their sake, and must not claim any superior dignity or

worth over the plants they support. Now just such is the office of the husband; and this statement of things is what people approach to more in proportion as they advance in civilization.

HOUSEHOLD MEASURES.—As all families are not provided with scales and weights referring to ingredients in general use by every housewife, the following may be useful:—

Wheat flour, one pound is one quart.

Indian meal, one pound two ounces is one quart.

Butter, when soft, one pound one ounce is one quart.

Loaf sugar, broken, one pound is one quart.

White sugar, powdered, one pound one ounce is one quart.

Best brown sugar, one pound two ounces is one quart.

Eggs, average size, ten eggs are one pound.

Sixteen large table-spoonfuls are half a pint, eight are one gill, four half a gill, &c.

WASH FOR THE HEAD.—"A Mother" asks, "What is an efficient remedy for removing dandruff in the hair, as she has an objection to using an ivory comb?" This objection is well founded, as it increases the evil. The following wash, applied with a small piece of flannel, to the roots of the hair, will be found excellent: Three parts of oil of almonds; one part lime-water; to be shaken up well, and can be procured of any chemist.—*Lady's Book.*

Advertising Department.

☐ A limited number of advertisements of an appropriate character will be inserted in the monthly Farmer at the following

RATES.

For one square of 15 lines, one insertion.....\$1.00

For each subsequent insertion.....50

☐ The above rates will be charged for all advertisements whether longer or shorter.

Farm in Westboro', Mass.,



For sale or exchange, for Boston property, situated on the old Grafton road, within 1 mile of the Railroad Depot, containing 27 acres of as good land as any other 27 acres laying in one body, in the town; it is elevated about 75 feet above the railroad, and overlooks the town, and is within 7 minutes walk of three churches and the town house, which for healthy location is unsurpassed. The buildings consist of a modern house, built by Boston mechanics in 1851, and is 32 by 23 feet, with a kitchen attached, 16 by 23 feet, two stories high, with a cellar under the whole. Wood-house, 16 by 20 feet; work-shop 16 by 12 feet; carriage and hen house, 16 by 21 feet; poultry yard, 30 by 53 feet, enclosed by slat fence 8 feet high; barn, 60 by 36 feet, with cellar under the same, so divided as to give a vegetable cellar containing about 2000 bushels; cistern and well water is brought into the house, and all the wash of the kitchen and privy is conducted by a drain to the barn cellar; likewise a farm house 24 feet square, 1 1/2 stories high, cellar under the same; there are three good wells of water and one good brick and cement cistern on the premises. There are now on the farm 142 large apple trees, mostly grafted, also 230 young thriving apple trees, mostly Baldwin, from 4 to 6 years from the bud, some of them have borne fruit; likewise 34 peach trees of early choice variety, 10 pear trees, &c. There has been taken from the farm the past year, 30 tons of hay, 375 bushels of corn in the ear, 700 bushels of carrots, beets and 8 turnips, 80 barrels grafted fruit, besides vegetables used in the family. For further information, apply at this office, of Messrs. SIMON BROWN or WILLIAM SIMONDS; at Westboro', of Messrs. FAYERWETHER & GRIGGS.

Feb. 5, 1853.

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The Farmers' Library.

JUST RECEIVED, the following assortment of Agricultural and Horticultural Books, embracing the standard works of eminent American and European writers, on the Farm, the Orchard, the Garden, &c. &c.

	PRICE.
American Farm Book, by Allen,	\$1.00
Farmer's Treasure, by Faulkner and Smith,	.75
Dana's Muck Manual,	1.00
Prize Essay on Manures, by Dana,	.35
American Muck Book, by Browne,	1.00
Lectures on Practical Agriculture, by Johnstone,	.75
Elements of Scientific Agriculture, by Norton,	.50
Principles of Agriculture, by Thaez,	2.50
Practical Agriculture, by Johnstone,	.75
Agriculture for Schools, by Blake,	1.00
Catechism of Agriculture and Chemistry, by Johnstone and Norton,	.25
American Agriculturist, by Allen,	1.00
Liebig's Complete Work on Chemistry,	1.00
Farmer's and Emigrant's Hand Book, by Marshall,	.75
Home for all, by Fowler,	.50
Book of the Farm, by Stephens and Skinner,	4.00
Cottage and Farm Houses, by Downing,	2.00
Downing's Country Houses,	4.00
Rural Architecture, by Allen,	1.25
Downing's Landscape Gardening and Rural Architecture,	3.50
Downing's Cottage Residences,	2.00
Fruit Garden, by Barry,	1.25
Complete Gardener and Farmer, by Fossenden,	1.25
Bridgeman's Gardener's Assistant,	2.00
Bridgeman's Kitchen Gardener's Instructor,	.50
American Fruit Culturist, by Thomas,	1.00
Gardener and Complete Florist,	.25
Florist's Guide, by Bridgeman,	.50
New England Fruit Book, by Ives,	
Youatt and Martin on Cattle, by Stevens,	1.25
Rose Culturist,	.35
Johnson's Gardener's Dictionary, by Landreth,	1.50
Rural Economy, by Bousmingsault,	1.00
American Rose Culturist,	.25
Bigelow's Plants of Boston,	1.25
Genera of Plants of the U. S., by Gray, 2 vols.	12.00
Gray's Botany,	2.00
Farnell's Chemistry,	1.00
New England Farmer, by Cole,	1.00
Ladies' Guide and Skilful Housewife, by Mrs. Abel,	.25
Hive and Honey Bee, by Richardson,	.25
Bee Keeper's Manual, by Miner,	.50
Bird Fancier, by Browne, paper 25 cents,	.50
Townley on Bees,	.50
American Poultry Yard, by Browne,	1.00
American Poultryers' Companion, by Bement,	1.00
American Fowl Breeder, by Moore,	.25
American Herd Book, by Allen,	2.00
American Shepherd, by Morrill,	1.00
Domestic Animals, by Allen,	.75
Diseases of Animals, by Cole,	.50
Hints to Sportsmen, by Lewis,	1.25
Dadd's Anatomy and Physiology of the Horse,	1.00
Mason's Farrier and Stud Book, by Skinner,	1.25
Management of Sheep, by Canfield,	1.00
Youatt on the Pig,	.60
Knowlson's Complete Cow Doctor,	.25
Horse Doctor,	.25
Guenon's Treatise on Milch Cows,	.35
Treatise on Hot Houses, by Leucham,	1.00
Allen on the Grape,	1.00
Schenck's Text Book,	.50
Breck's Book of Flowers,	.75
Downing's Fruit and Fruit Trees,	1.50

For sale at the Publishers' prices by RUGGLES, NOURSE, MASON & CO., Quincy Hall, (over the Market,) Boston.
Jan. 1, 1853.

Ayrshire Stock.



The farmers and dairymen of Concord, (Mass.) and vicinity, who are desirous of improving their stock, are informed that the subscriber has purchased a fine thorough bred MALE of the AYRSHIRE breed, which he will keep for the present at his stable, near the depot.
July 9, 1853.

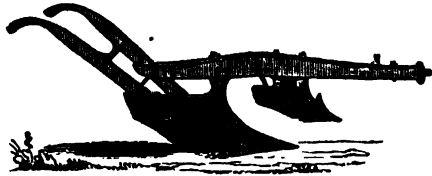
JOHN RAYNOLDS.

Super-Phosphate of Lime,

IN bags and barrels, made by C. B. DeBURG, a warranted pure and genuine article, with full directions for use. For sale by GEO. DAVENPORT, 5 Commercial, corner of Chatham St., Boston, agent for the manufacturer.
Also, for sale, Ground Bone, Bone Dust, Barn Bone, Guano, and Grass Seeds of reliable quality.
March 26, 1853.

THE BOSTON AND WORCESTER

EAGLE DOUBLE PLOWS.



THE superior merits of these Plows, consist in,
1. The mode of attaching the forward mould-board to the beam, by which great strength and durability are secured, as also the various desirable changes in depth of work, and relative depth of each plow, the same being regulated to any shade of nicety, with perfect facility.

2. The entire and handsome overturning of the sod furrow, by the forward mould-board, to the extent of the whole width of furrow taken by the plow, placing it beneath, out of the way of the teeth of the harrow, cultivator, or other implement, so that it is in no case dragged to the surface in the after-cultivation of the crop:

3. The thorough and finished work done by the rear mould-board, in taking up its furrow of under soil and sifting or scattering it over the inverted sod, so as to entirely fill to the surface, and at the same time break open any undue cohesion of the soil, leaving the plowed land in a finely pulverized condition, requiring little labor with the harrow or other surface-working instrument,—and indeed, in all tolerably free loams, rendering the use of these instruments, as pulverizers, quite unnecessary:

4. The remarkably light draught of the plow, in proportion to the amount of work and the thoroughness of pulverization accomplished.

Several sizes of the BOSTON & WORCESTER EAGLE DOUBLE PLOW, are made by the subscribers, from patterns of their own original invention. They invite their friends and customers to examine these Plows, as to quality and durability of material, thoroughness and finish of construction, and to test their working properties.

Manufactory at Worcester, and Warehouse Quincy Hall, over the Market, Boston.

RUGGLES, NOURSE, MASON & CO.

April 30, 1853.

Church and Barn Vanes.

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May 21, 1853.

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WE respectfully solicit the attention of purchasers of GARDEN SEEDS to our extensive stock, which we offer for sale. We have all the sorts of Vegetable Seeds that have proved worthy of cultivation; also, Grain, Grass and Flower Seeds. All the varieties are raised and selected expressly for our trade, and we do with confidence recommend them to all who desire to procure seeds that will prove true to their names.

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No. 70 State Street.
Also, 100 bags Liverpool Salt.
May 14.

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Boston, June 11, 1883. 4w*3

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April 9, 1883.

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Is published on the first of every month, by JOHN RAYNOLDS and JOSEPH NOURSE, at Quincy Hall, South Market St., Boston.

SIMON BROWN, Editor.

FREDERICK HOLBROOK, } Associate
HENRY F. FRENCH, } Editors.

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May 14, 1883.

2w*3

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June 11, 1883.

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ENGLAND FARM



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. V.

BOSTON, SEPTEMBER, 1853.

NO. 9.

RAYNOLDS & NOURSE, PROPRIETORS.
OFFICE ... QUINCY HALL

SIMON BROWN, Editor.

FRED'K HOLBROOK } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

CALENDAR FOR SEPTEMBER.

"I at my window sit, and see
Autumn his russet fingers lay
On every leaf of every tree;
I call, but SUMMER will not stay.

She flies, the boasting goddess flies,
And, pointing where capsaers shoot,
Deserve my parting gift, she cries,
I take the leaves, BUT NOT THE FRUIT."

Another summer has departed, with its scorching suns, and parching droughts, and the gorgeous livery which she had put on has faded into wrinkled age.

"Turn whenceso'er we may,
By night or day,
The things which we have seen we now can see no more."

The year is on the wane. Its fulness and vigor are gone. "It has reached the summit of the hill, and is not only looking, but descending into the valley below." The grass and cereal grain harvests are gathered in, while our great Indian Corn Harvest waits for more cheering suns, and the fervid September days. In robbing us of summer beauties, Nature does not leave us without new objects to gratify both the taste and eye. "The Fruit garden is now one scene of tempting profusion. The Peaches and Nectarines have become fragrant, and the whole wall where they hang is 'musical with bees.' The rosy cheeked Apples look out from among their leaves, like laughing children peeping at each other through screens of foliage; and the young standards bend their straggling boughs to the earth with the weight of their produce." The summer birds have mostly gone, "urged thereto by a prophetic instinct, that will not be disobeyed; for if they were to consult their feelings merely, there is no season at which the temperature of our climate is more delightfully adapted to their pleasures and their wants." The Bob-o-link has put on his russet dress, and as he flies towards the South, higher in the air than he ever soared in the summer months, greets us with his valedictory, *wee, wee*, as he passes along. The Swallows and Martins

have also gathered up their young and bid good-bye to the summer here. We miss their busy chatterings, as the absence of a prattling child. The Blue Bird lingers a little longer, and the Lark still utters his shrill note on the topmost branch of the neighboring tree. The Flower Garden is almost as gay as it was in June, so that Nature compensates us for the losses of Summer.

Such are some of the aspects of Nature about the Farm in the first autumnal month; it is profitable to note them and find instruction in their varied beauties, and in the wisdom and beneficence of Him who hath created them all. There are a thousand others, too interesting to be passed with idle gaze, and thoughtless heart; but we had rather talk of them with you under the green tree, or in the social evenings by the first autumnal fires.

MEADOW MUD.—Though urged so often, we must suggest again to the farmer the importance of getting up a large quantity of this valuable absorbent and fertilizer. Haul it upon the uplands ready for the corn land next spring, by placing a large shovel-full in each hill, mingled with a handful of guano. In this process you carry back the vegetable, together with some of the mineral matter, which has been washed from the hills through a period of hundreds of years. Have it in abundance, also, to cover the droppings of the stalls.

FRUITS.—Gather up all the windfalls and feed them to cattle or swine; if cooked and mixed with meal, your porkers will pay you compound interest on the cost and trouble, and you will destroy a host of insects which would scourge your orchards another year. If any of your trees that were budded last month have failed, stick in another bud now. They will be likely to take, up to the middle of the month.

STRAWBERRIES.—Clean out and manure the old beds, and make new plantations, if it was not done last month.

NURSERIES.—Keep the nurseries clean by fire-

quent hoeing, and if drought prevails, as is not unfrequent in September, water, mulch, &c.

LAYING DOWN LANDS TO GRASS.—See Calendar for September, 1852; but it will be well to remember that the best time for this work comes only once in twelve months, August and September.

HOPS.—The cultivator of this crop must attend to it now.

TURNIPS.—Your turnips being up and looking well, see that they are properly thinned and weeded. Nearly half the turnip crops are wasted by the plants being left too thick.

TOPPING CORN.—While we have no doubt that the corn is injured by this practice, we do not hesitate to recommend it. We lose something in the weight of kernel, but gain in the fodder; and materially in managing the future harvest; it is worth while, perhaps, to go a little more particularly into the matter.

The leaves of plants perform two important functions. Evaporation, which principally is effected by the lower surface, and by which the water which has been absorbed by the roots and absorbent vessels is carried off in part, leaving the residue in the form of concentrated juices:—and, second, respiration, by which carbonic acid is taken into the circulation of the plant and performs an important part in the conversion of the proper juices, and in preparing and maturing those elements which constitute the nutritious quality of the fruit. This process must of course cease when the parts which perform the office are destroyed. It would seem that such must be the effect produced by topping corn; and though the proper process may still go on by means of the few leaves that are left below the topping, yet it will be feeble and partial, the corn will ripen by evaporation merely; or rather, both the evaporation and the respiration will be diminished, to the consequent injury of the grain, which will have less of the nutritious property, and less weight, will be more liable to ferment, and to lose more in weight by the end of winter. By the process named, the proper secretions of the plant are in ripening, rapidly converted into sugar; and so far as the topping checks the respiration it would also diminish the saccharine quality and render the corn less agreeable to the taste, as well as less nutritious. But after having tried both ways, we incline to the opinion that the loss is less to top it, than to suffer the top to stand, and dry up and realize the inconvenience in harvesting.

SWINE.—Begin to feed the swine intended for fattening more liberally. Gather the early pumpkins, apples, and with the small potatoes, boil and mix with meal for them. To give them now as much as they will eat with a good appetite, is the cheapest way to keep them.

For the New England Farmer.

THE WANTS OF AGRICULTURE.

MR. EDITOR:—In the August number of the *Farmer* may be found an article from a Brattleboro' correspondent, which I sincerely hope will not escape the notice and careful consideration too, of any of your agricultural readers. It is a brief description of a charter obtained for establishing an Agricultural College in the State of New York, with some comments and suggestions by the writer upon the propriety of a similar movement in our own State. The article referred to contains so many good, suitable hints, that I feel disposed to comment somewhat upon their merits; hints that may be made applicable to the people at large, and also to the various associated agencies throughout the State, whose object it is to promote great interest of agriculture, and more particularly our "State Board."

The establishment of an institution of some sort, for the full development of a more complete, scientific, and, at the same time, practical system of agriculture, is what in my opinion we ought to aim at; and for one, I am glad to have our neglect of this, our "masterly inactivity," so presented to our view. I do not, however, wish to be understood as believing that there is not existing in the public mind a feeling favorable to the proposition; not so; on the contrary, I believe that a constantly increasing interest is being felt and manifested; but still, that it is so undefined and unshaped, as to justify the conclusion that it exists but to a very limited extent.

A sound, practical knowledge of the science of agriculture, is what of all things we most stand in need of; we want it, for the full and complete development of all the resources that a wise, creating hand has so profusely placed at our disposal, and upon which the great mass of the people are as yet uninformed.

What is there that will so much elevate or ensure that just estimate of the true dignity of our occupation, an occupation which, most of all others, constitutes the true greatness of a State? What, but the possession of this very knowledge and skill in conducting it? Let the *fact* but be established, that to make a good farmer, a deep thinking, well educated mind is as necessary as the strong, sinewy arm, and you place the profession in its just and rightful position.

My attention has been given to this occupation of farming to a very considerable extent for the last twenty years, and I profess to understand pretty well all its details; that is, the general or common management of a farm; but as to a knowledge of the great principles appertaining thereto, I confess I am obliged to admit almost an entire ignorance; such, for instance, as to the variety of treatment required for the various kinds of soils—the proper mode of preparation and application of manures—the adaptedness of particular crops to particular localities, and the proper succession of crops; it is the want of a true knowledge of these, and such as these, and the great principles connected with them, that I so much regret—principles and laws established and fixed by a beneficent Creator, and that must continue as unbending and fixed in all the future, as they have been in all the past; we must go to *them*, they won't come to us—go by the light of science, with a well educated mind, prepared fully to compass the mys-

teries of our profession—nothing short of this will satisfy, nothing short of this will ensure success.

The question now arises, what State other than our own Massachusetts—with all its intelligence, wealth, and public spirit, should be foremost in this important movement? And what associated body, other than our own "State Board" of agriculture, is there, so able to shape up and present to the people some plan for establishing an institution for the promotion of a more enlightened system?

And now in closing I will say, that I have been somewhat disappointed in the action of the Board in this behalf. I do not intend to find fault, for I know very well what obstacles there are to contend with, and that it requires deliberation and wisdom to manage judiciously so important a matter; but still, I feel that it is time something of this nature was submitted in some form, and that the people should be advised in relation thereto. As at present advised, I do not see much to encourage the hope that any thing of consequence is to be presented; surely there is a wide field open, and the laborers are many; all that in my opinion is required, is, some efficient and decided action by the State Board, to ensure complete success.

I have extended this train of thought perhaps farther than I ought, and I will stop, hoping to hear from some of your many able correspondents upon this important subject.

Yours truly,
Dorchester, Aug. 8th, 1853.

J. H. R.

CHANGES OF TIMBER FROM CLEARING LANDS.

There are few things connected with the natural history of trees or plants more surprising, or that have occasioned more speculation, than the changes that not unfrequently take place in the growth of timber after clearing, from what it was before that operation. So inexplicable is this change, in many instances, on the commonly received principles of vegetation, that it has been adduced by the believers in the doctrine of spontaneous production, as one of the strongest supporters of their system. We think, however, that, singular as the phenomena may be, its solution cannot require a supposition so unphilosophical.

In the Southern States, where the timber is principally pine, when that is cleared off, a growth entirely different, and composed of such as was unknown to the place before it springs up; and this, when cut off, is often succeeded by new varieties, or perhaps by a return of pine. Lands covered with oak and chestnut, or such timber as shoots up from cut trees, do not change the timber except in a small degree, it is on those lands covered with timber that requires to be propagated by seeds that this change is most apparent. Everybody must have noticed in what numbers a species of wild cherry will spring up where the forests are cut down, or are propagated by winds, though that particular kind is rarely or never found growing in the unbroken forest.

More than thirty years since, a part of our farm was cleared of its timber, a dense growth of maple, bass wood and elm. A small piece of perhaps half an acre was separated from the rest by a narrow ravine; after being cultivated three or four

years, and part of it planted out as a nursery of fruit trees, it was left to itself. It was soon covered with young trees, which were suffered to grow unmolested, and there are now on this small spot, white oak, black oak, butternut, white poplar, common willow, walnut, hickory, and black cherry, of all varieties of which not one was growing near at the time it was cleared, and most of them not within three-fourths of a mile. An explanation we leave to others.—*Warren Journal*.

For the New England Farmer.

MOWING MACHINES.

Many of the farmers of New England have not yet had an opportunity to see a mowing or reaping machine in operation, and doubtless, some have the impression that they will never be much used, upon our hill and valley farms in New Hampshire and Massachusetts. Until I witnessed their operation, I had myself the idea that their appropriate field would be the western prairie, or the broad wheat fields of a more level country than New England.

On the 26th of July last, I attended the trial of two *Mowers*, at Greenbush, near Albany, in a fine field of herdsgrass. One of them was a machine of Ketchem's, a description and drawing of which is contained in the monthly *Farmer* of August, 1852; the other, an improved Mower and Reaper, made by Emery, of Albany.

I will not undertake to decide upon the comparative merits of the machines, but rather give some general idea of their operation, for the benefit of those who have not seen them. There was no perceptible difference in the quantity or quality of the work done by each. I have since seen in the Crystal Palace, at New York, Reapers and Mowers of various kinds. They all cut upon the same principle; by large teeth like a saw, moved back and forth, by gearing, attached to a heavy iron wheel which rolls upon the ground, serving as the great wheel of the machine, and carriage wheel for the machine and driver. The Mower is drawn by two horses abreast, driven by a man who rides and drives and works the machine. The work is hard for two good horses, but not hard for the driver. It cuts a swath about four and a half feet in width, as fast as the horses can walk, and the mowing I saw done was performed closer and better than any man could do it, with a scythe. After the hay was raked off, no mark of the swath could be seen.

In cutting the first swath, the horses walk in the grass; afterwards they travel over the last swath. The grass is spread very evenly, as it is cut, so that the boys who used to spread, will be out of business, when horses do the mowing.

One of the machines was owned by some young men in the neighborhood, and had been used, to cut about ninety acres, the present season. One of the owners said he could cut a ton in one hour easily, and that the machine required no great care, and very little repairs. The cutting part requires grinding about once a day, upon a common grindstone, which must have a very long crank. The owners, and a very large number of gentlemen who were present, seemed perfectly satisfied that mankind would soon shift the labor of mowing off upon the brute creation.

Mowing machines will no doubt be used in most

if not all, of the New England States, the very next year. We have some farms in Rockingham county, which yield two hundred tons of hay each, and many which yield fifty. The Mower will work on any land where a horse-rake can be used. We shall soon see haying done about in this manner. A man and span of horses will drive into the field, at sunrise, and resting an hour at breakfast, will cut and *spread* about six acres before noon. Another man may be occupied in the forenoon, in cutting out with a common scythe a few corners, and spots near trees, where the Mower cannot well go, and in raking out with a hand-rake a breadth from the fences, to get ready for the horse-rake. After dinner, one of the men will mount a Delano's Horse-rake, and in three hours he can easily rake the six acres into windrows, while his comrade, with a couple of extra hands for the afternoon, can put the whole in cock.—There should be on the six acres at least ten tons of hay, making about three hundred cocks, and two hundred of these should be covered with *hay caps* of cotton cloth, and so made secure against change of weather for a week. The next fair day, our two men may get in the hundred cocks easily, and they may open the other an hour to the sun, and get it into the barn as fast as they find it convenient.

I think by keeping up with the times, and availing ourselves of the *thoughts of men*, as made manifest in their inventions, we may see *two men* perform easily the former labor of six, and that most of the hurry, and disappointment, and over exertion of haying, may be done away with.

And so, through all farm labor, as in other fields, the mind asserts its supremacy over the body. The hands are feeble, and alone, are no match for the rugged obstacles which Nature opposes to our wishes; but aided by an active intellect, they will finally gain for us that dominion over the earth which is our rightful heritage.

HENRY F. FRENCH.

Exeter, N. H., Aug. 18, 1853.

POTATOES.

The potato should not be harvested till it is perfectly ripe. If the tubers are moist, with much soil adhering to them, it is better to convey them at once to the bins, as they are, than to free them from the soil, as it is utterly impossible to do this with economy without drying them, and equally as impossible, to dry them sufficiently for this without essentially deteriorating their eating qualities. In some sections it is a common practice with the cultivators of this root, to place the crop in barrels or boxes, as soon as dug, and secure them from the contact of the atmosphere by a stratum of sand. This retains them in a moist condition, and effectually secures the preservation of all their excellencies. Since the prevalence of the potato disease, instances have come to our knowledge, where potatoes that were dug and immediately deposited in the cellar, remained sound, while those placed in barrels and standing a day or two out of the cellar, and intended for the early market, have badly decayed.

LEACHED ASHES AS A TOP-DRESSING.

DEAR SIR:—I noticed a communication calling for an experiment of applying leached ashes as a top-dressing upon meadows.

I will mention a striking instance. It was in my door yard lot, in about half of which the grass always grew very luxuriant, while the other half would hardly support weeds. I applied leached ashes to a portion of the poor part, and rich mellow earth to the other, and now to my satisfaction I see the result where the leached ashes were placed. The grass is equal in growth to any in the yard, and where the earth was put it has helped it, but not one fourth as much. I came to the sage conclusion, some time ago, not to sell a bushel of ashes off my farm. It pays 25 per cent. to apply ashes as a top-dressing upon meadows, gardens, wheat, or anything else, so far as I have tried it.

Yours truly, EXPERIMENTER.

¶ We take the above from the *Ohio Farmer*; the editor of which paper says, in addition to the communication, that "for peach and apple trees, there is nothing superior to leached ashes."

For the *New England Farmer*.

AN HOUR WITH A BUDDER.

Seeing over my garden fence that neighbor Good-man had got George Handy, a first-rate budder, at work in his little nursery, I first hung up my hoe, and walked round through the gate to see a little into the operation. Like many other things, it is "very simple after you understand it." I had read about the matter in divers books, but Handy told me what I never knew before, and I saw the thing done too.

The trees were of different sizes,—from a quarter of an inch to an inch in diameter, and were all just trimmed up roughly, about two feet from the ground. George was budding. He sat on a small box the south side of the row, and had a dish of buds, all cut ready to be inserted, in water before him. I was surprised to see how short is the process in skilful hands. George would hitch along his seat with one hand—set the dish forward with the other—seize a tree and bend it down under his right arm, and then make the cuts and the opening, and slip in the buds as quick as my eye could follow him. I noticed that he selected a smooth place in the young tree near to the ground, so that the future tree should have a uniform appearance throughout, and not present an ugly jag. First he made a cut up the tree about three quarters, of an inch long; then another short one across the top of the first,—then with the ivory in the other end of his knife, he loosened and opened the corners of the bark at the top. He now took up a bud from the dish before him, and holding it by the foot-stalk—as he called the stem without the leaf—he again applied the ivory, raising the bark a little, and at the moment entered the bud. The top of the bud seemed too weak to admit of being forced down with the fingers the whole distance. This was quickly done with the end of the knife-blade, inserted just below the foot-stalk.

The top of the bud now stuck out at the top its whole thickness. A cross-cut with the knife exactly over the second cut made in opening the bark at first, squared off the wood of the bud-slip, so

that it settled at once down into its place, close to the slimy hard wood, to which it would soon adhere and grow.

George showed me how he cut the buds. He first selected scions of this year's growth, not rank sprouts with soft, half-formed wood; nor on the other hand, little peeling twigs, but good thrifty hard scions, from which buds of some body and firmness could be readily cut. As he takes these from the tree he cuts off the leaves, as they would rapidly rob the scion of its fulness in hot, dry weather. He showed me how he cut the buds. His knife had a thin, sharp blade. He held the stick of buds with the top towards him, and inserting his knife carefully about half an inch or a little more below the footstalk, he brought it out as much above. The bud dropped off into the dish of water, and the knife soon sent another and another after it.

I had heard of budders cutting their germs as they went along. I told George so. He replied that "he should'n't think they would go along very fast then."

I took out my timepiece to see how long the young man was in setting a bud. He seized the tree—bent it down towards him—made the two cuts—opened the bark—slipped in the bud, and off with the top, in just twelve seconds! He set four in good shape, in fifty seconds! Goodman said he never saw the beat of that. I told my neighbor that the job wouldn't last a great while at that rate. The budder said he didn't care how soon it was done, for it was a little worse for the back than the spring-tooth horse rake.

To be sure the budder's position is unfavorable to a comfortable spine, and ought he to follow such work many hours without change?

By this time quite a number of buds were set, and I saw the *tying* done. George had brought a new furniture mat, which, cut in squares, furnished the strings. These were well wet and tucked through his left suspender. George had to down upon his knees and bend over pretty low to get a good chance at the work. He placed the middle of the string a trifle below the upright cut in the bark, and carried the ends around and around, keeping them firmly drawn until the whole wound was faithfully covered, leaving only a grain of space above the footstalk for the bud, which would have "more air" when the footstalk drops away.

"Very good," said I, "and what is the next process with such a subject?"

"The next thing," said George, "is to cut off the string next Spring after the bud has started. If it looks lively, and seems disposed to grow, I cut off the whole tree down to within a few inches of where the bud was inserted."

I had some further talk about the future management of the trees, which will require another chapter. Yours, W. D. B.

Concord, Mass., Aug. 16th, 1853.

For the New England Farmer.

TO DESTROY VERMIN IN FOWLS.

With a feather, dipped in spirits of turpentine, touch those parts of the fowl most infested, as top of the head and under the wings, and they will soon disappear. If there are *nits*, the application will need to be repeated. It can easily be done by going among them after they have roosted, and a small quantity only is necessary.

A QUEER OLD BOOK.

We have had placed in our hands, by a lady in Vermont, a collection of old books, one of them dated London, 1631; and others printed in Cambridge, this State, matching them in size, type, and the old queer mode of expression. The titles are as funny as some of the sentiments. One is "New England's True Interest Not To Lie." This was a sermon preached in Boston, by Mr. W. Stoughton, preacher of the gospel in Dorchester, 1679.

Another is "God's Terrible Voice in the City of London; Wherein you have the Narration of the Two late Dreadful Judgements of Plague and Fire Inflicted by the LORD upon that CITY; the former in the Year 1665, the latter in the Year 1666. Cambridge, Printed by Samuel Green, 1667. Another is "Tydings from Rome; or England's Alarm."

The two last books are exact reprints, we think, from "Markham's Farewell to Husbandry," and are upon Orcharding and the Country Housewife's Garden.

For the New England Farmer.

MIGRATION OF SWALLOWS.

MR. BROWN:—Having noticed an inquiry in your paper, a few weeks since, calling for information in regard to the time that swallows leave the north, your correspondent from Derby, Ct., says some things he knows, and some he thinks; now he probably has seen barn swallows as late as the 28th of August, but as to his seeing chimney swallows as late as the last of September or the middle of October, I think he must be mistaken, (unless it was some heedless straggler,) as they invariably leave here as soon as the first of Aug., if not before. They do not appear to be as hardy, and are not as plenty, as other swallows, for some cold seasons they do not visit us at all. Some twenty years or more ago, I lived with an old gentleman in a town adjoining this, and he told me a man offered to give him five dollars if he would show him a swallow (meaning a barn swallow,) after the 25th of July. Since then I have observed them with some interest. About the 20th of July they begin to congregate together on the barns and fences, and from then to the first of August their numbers decrease to less than one-fourth, and after that time but few are seen.

The 2d day of August, 1852, in company with a few others, I paid a visit to the Grand Monadnock, distant from this place about fifteen miles, and while standing on the pinnacle, I noticed the swallows, a few of which were performing their usual gyrations through the air around me, apparently as much at home as in any farm yard. This year I have seen them every day, thus far, though but few are left.

The Labrador swallows have all gone from here; they had about fifty nests in sheds near us. It is a great place for birds of most all kinds here, in the summer season. I. D. WARD.

North Ashburnham, Aug. 9, 1853.

REMARKS.—The above corresponds with our own

observations. The martins left their boxes in our garden Sunday evening, Aug. 7. This year, the barn swallows remained later than usual. A few remain still, but they are undoubtedly late broods; the largest portion of them left the 4th and 5th of August. For several years past they have left on the 27th, 28th and 29th of July.

THE SANDWICH ISLANDS.

We are indebted to our correspondent, Mr. GREEN, at Honolulu, for several copies of *THE POLYNESIAN*, one of which contains the report of *THE ROYAL HAWAIIAN AGRICULTURAL SOCIETY*, at Honolulu. The society appears to be in a flourishing condition, and we notice with pleasure that some of our own people are interested in the prosperity of those remote regions, and are active in aiding the efforts of the agriculturist there.

They find the raising of coffee a profitable business, and one, "evidently destined to advance; and the Kona coffee of Hawaii, it is admitted by the best judges, is not surpassed by any in the world."

The farmers of East Maui have gone to work with the determination to raise sufficient wheat to supply their home consumption. The experiment of raising wheat has been a doubtful one; but the efforts of Mr. GREEN, and a few other earnest men, have given general confidence of future success. They are about erecting a good Flour Mill on the Wailuka river.

The Indian Corn crop has increased, and what has been produced has sold from three to five cents a pound. The corn crop, however, is a very uncertain one, the success or failure of which depends in a great degree on the seasons and time of planting. The study of the weather is almost as important to the farmer of these Islands, as to the mariner. On Oahu the season for planting is from November to March, while on Kauai, only 70 miles distant, where corn has been planted almost for the first time this year, it is found that that planted in the winter months has come to nothing. On the contrary, that planted by Lieut. Reynolds in September last, gave a fair yield.

The climate is admirably adapted to the sweet potato, to which increased attention is given. The report states that it grows well in almost every part of the Islands, and no where better than among the dry, hot stones of Puna, Kauai and Kona, on Hawaii. No one who has ever travelled over those districts can fail to have been struck with astonishment at the sight of beautiful sweet potatoes, growing in hills of broken lava, with not a particle of earth to be seen in their vicinity. The sweet potato is the great article of food in the dry burnt districts of Hawaii, and the cost of raising them is next to nothing. The yield is from 125 to 175 bushels to the acre.

Apples, pears, plums, cherries, &c., they have

not yet been able to raise, but produce figs, grapes, bananas, oranges, and most other tropical fruits in abundance. The potato disease has not made its appearance among them.

The raising of cattle, when connected with the dairy business, is found profitable. They require no feeding, no salting, no sheltering. On the island of Oahu they are worth about \$5 per head, all ages counted, and on the other islands only about half as much, owing to the difficulty of transportation to a market. They are improving the breed by importation of stock from the states and other countries, particularly Australia.

Sheep are abundant, and have been kept heretofore for their flesh, without the least regard to the value of their wool.

The best breeds of swine have been imported by the society. This report states that the pigs imported were "a present from HENRY A. PIERCE, Esq., of Boston, and that the freight etc., were given by Messrs. PIERCE & BREWER, two gentlemen who seem ever ready to advance the agricultural interests of the islands." We take sincere pleasure in noticing these noble acts in our own citizens. Mr. PIERCE has also presented the Society with hives of bees, one of which was packed in ice. Horses and poultry of the finest breeds have been imported, so that our friends out there bid fair not only to produce the most abundant crops of bread stuffs, vegetables, beef, poultry and pork for their own use, but for their neighbors, the Californians. We cannot but feel a lively interest in their efforts, and wish them complete success.

For the New England Farmer.

THE TOMATO.

To many persons there is something unpleasant, not to say disgusting in the flavor of this most excellent fruit. It has, however, been used for culinary purposes in various countries in Europe, and has of late years been extensively cultivated in this country. It is one of the most powerful deobstruents of the *Materia Medica*; and in all those affections of the liver and other organs where calomel is indicated, it is probably the most effective and least harmful agent known in the profession. A chemical extract may be obtained from it, that will altogether supersede the use of calomel in the cure of diseases. When used as an article of diet, it is almost a sovereign remedy for dyspepsia and indigestion. It is, also, a most powerful alterative. Eaten as fruit or as common food, it is a most excellent article; and as a sauce, pickle or preserve, equal if not superior to any, and may be prepared and eaten in as many different forms. I have often used it in complaints of the liver and other organs with the happiest success.

The method commonly adopted of preparing the fruit, is to cut them in slices, and put them in salt and vinegar like cucumbers.

To stew them, take them ripe from the vines, slice them, put them in a pot over a stove or fire, without water; they will cook in their own juice;

stew them slow, and when done, put in a piece of good butter, and eat them like apple sauce.

To preserve them in imitation of figs, to which they probably are equal, cut them in slices, lay them in a stone pot with alternate layers of good brown sugar. Supposing the method of raising them to be generally understood, it is probably not necessary to describe it here.

J. B. E.

Vi. Insane Asylum.

ERUPTION OF MANUA LOA, FEB. 20, 1852.

In the Sandwich Island *Polynesian*, we find the following description of an eruption, which formed the subject of a poem which is too long for our columns:—

The eruption, of which the following poem is a truthful and vivid delineation, is still fresh in the recollection of the residents of the islands. Never, perhaps, in the history of the volcanic phenomena of Hawaii, has such a startling eruption occurred, as the one so graphically described in this wild lyric. The scene was unique, grand, sublime, awful, terrific! No language—no pencil can paint it in adequate colors. To be realized, it must have been *seen* and *felt*; and for this, the author of the poem had the most ample opportunity, having not only watched its raging actions for twenty days, but having also ascended the thundering mountain, and stood one whole night in close proximity to its consuming fires.

The eruption commenced just before day-break. Hunters on the hills in that vicinity say that they heard subterranean rumblings, and felt a quivering of the mountain during the night preceding the eruption, as described in the poem.

When the mountain rent, a column of molten rock, fused to a white heat, and some 2,000 feet in circumference, shot up from 500 to 1,000 feet heavenward, and this fiery column continued its ever-varying and fantastic play for twenty days!

The noises and detonations were as varied and startling as can be well conceived. At times, the roar was heard at a distance of 40 or 50 miles. The atmosphere was filled with smoke and *Pele's* hair, ashes and cinders were scattered wildly over the mountain and over the sea. Day after day the sun shed a yellow and baleful light through the dark clouds of smoke which careered along the heavens. Along the rim of the exploding vortex, a hollow pyramid, one mile in circumference, and five hundred feet high, was soon raised by the incessant falling of the matter expelled from the burning orifice. As the descending showers of fusion fell upon this pyramid, it presented an ever-changing scene, more glowing than the most vivid imagination can paint, and more dazzling than showers of countless brilliants.

From this awful fountain, a burning river rolled down the slope of the mountain towards Hilo, with a breadth varying from half a mile to three miles, and a supposed length—including its windings,—of from 39 to 40 miles, entering, and cutting its way nearly through a dense forest in the rear of Hilo. But the fountain ceased to flow before the molten river reached the sea, yet for months after, smoke issued from the orifice, and the congealed river now remains as a witness to the mighty throes of the vast mountain, under the volcanic influence.

For the New England Farmer.

IMPORTANT QUERY.

MR. EDITOR:—As you gentlemen of the quill, are supposed to know everything, I wish you would tell me what is the best way to do with five acres of potatoes, so diseased, as to smell offensively, and to be not worth digging! Ten days ago, the field bid fair to yield 800 bushels—now they are not worth picking up. How will it do to plow the land and turn them in, covered with the furrow slice? Will they be of any value as a fertilizer? Or are they too much poisoned for that? I want them out of sight and smell—and I fear that many of my neighbors are in the same boat. Can you tell me what is best to be done?

Marblehead, August 16, 1853.

ESSEX.

N. B.—Our cabbages look first rate. Our onions are blighting some, so that there will not be more than two-thirds as many as we expected. Corn never appeared more promising. There will be plenty of second crop.

REMARKS.—Deficient, sadly deficient, my dear sir, in the information you desire. A field of our own, three years ago, in the condition you describe, was abandoned, but on trying some of the hills in October, fair and sound potatoes were found, and some thirty bushels dug. How came they there? The rotten potatoes can be of but little value as a fertilizer.

For the New England Farmer.

HOW TO CURE WARTS.

MR. EDITOR:—Reading in the *Farmer* a communication of inquiry for the cure of Warts on the teats of cows, I relate the following for what it is worth:

Some two years ago I was very much troubled with an abundance of warts on my hands, and to rid myself of them, tried, as I thought, all the remedies,—such as lunar caustic, turpentine, saleratus water, and the juice of milk weed, &c., without a cure.

Now every farmer knows that the shell of our walnuts or butternuts (for I used both) contains a juice which acts in the character of caustic; we call it stain.

I observed that fact, and took the benefit of it to kill my warts, which I most certainly did. It was an experiment that proved well with me and I have no other desire in this communication, than that others should try the experiment so simple and easily obtained. If any one should see fit to try it, I hope he will tell the results for the information of all.

Yours, &c.,

A SUBSCRIBER.

Southbridge, July 31, 1853.

PROSPECTS OF THE SEASON.—The prospects of the season continue favorable, with the exception of the potatoe crop. The rot is certainly among them, and many are already lost. Copious rains fell during the fourteenth and fifteenth days of August, washing out the air and giving us a clear and delightful atmosphere after the sultry, hot days which preceded them. The lightning was intensely vivid, and the clouds were charged in an

unusual degree. Corn continues to look finely. Apples will be scarce, but on visiting various parts of this State and New Hampshire, we find more than we had expected.

WAIT AWHILE.

Cast a seed into the earth—

Wait awhile;

Cheer the little flow'et's birth

With a smile;

Shelter it from wind and storm

Sweeping by;

No rude hand let it deform,

Lest it die.

In the summer it shall bloom,

Fragrant with a rich perfume,

All your care repaying.

Store with truth an infant's mind,

Wait awhile;

Greet the first fruits that you find

With a smile;

Bid it, with truth's flag unfurl'd,

Move on;—

In its battles with the world

Teach it grace;

Then, when youthful years have flown,

See the child to manhood grown,

God's whole law obeying.

EXHIBITION OF THE VERMONT STATE AGRICULTURAL SOCIETY.

The annual exhibition of the Vermont State Agricultural Society will be held at Montpelier, on Tuesday, Wednesday and Thursday, the 13th, 14th and 15th of September, 1853.

An area of forty acres will be enclosed for the exhibition; and within the enclosure suitable structures will be erected, and arrangements made for the accommodation of all who wish to exhibit either animals or articles. Fresh water, forage consisting of hay, grass, green oats, and cornstalks for cattle, horses, and sheep, straw for littering and oats for feeding horses, and grain for swine and poultry, will be supplied, free of charge, to such exhibitors as choose to keep their animals on the grounds enclosed; and exhibitors of valuable horses, desiring barn accommodations for the same, may procure them in the village at a reasonable expense.

Exhibitors must become members of the Society; and must have whatever they intend to exhibit entered on the Secretary's books on or before Tuesday, the 13th of September. It is quite desirable, however, that the entries should be made as early as Monday, the 12th.

Persons residing out of the State, may compete for premiums on foreign stock, plowing, agricultural implements, and machines, the various manufactures named in the Premium List of the Society, under the head of Discretionary Premiums; and may make entry of Animals or articles of any class, for exhibition merely, which will be admitted within the enclosure for that purpose, if deemed worthy by the Executive Board.

Arrangements have been effected with all the Railroad Companies in Vermont, to carry all animals and articles for exhibition, to and from the Fair, free of charge, and without changing cars; and visitors each way, at half-fare.

Gentlemen from the States, and from the Can-

adas, are cordially invited to participate in the exhibition.

Communications may be addressed to J. A. Beckwith, Corresponding Secretary of the Vt. State Agricultural Society, Middlebury, Vt., or to his agent, E. P. Walton, Montpelier, Vt.

FREDERICK HOLBROOK, Pres.

J. A. BECKWITH, Sec.

For the New England Farmer.

THE GARGET.

Relative to an "Inquiry touching the Garget" in cows, I have to say, that in every case that has come under my notice, I have prescribed the root of what is commonly called "Crow Berry," and have never known it fail of curing the malady.

Mode of application: cut a piece of the root, about the size of a gill cup, in small pieces, and mix with Indian meal; give twice in twenty-four hours. Cows will eat it in this way as readily as they will eat potatoes.

CROPS IN HAMPSHIRE COUNTY.—Grass, first crop was good; afterwards will be superior; late pasturage abundant; rye and oats good. Corn looks extremely well, and is forward for the season; potatoes will probably average a fair crop, although some pieces show a tendency to rot. Broom Corn, a prominent crop in the valley of the Connecticut River for twenty miles above Mount Tom, is but fair. Apples are a failure. Peaches and pears abundant. L. E.

Northampton, Aug. 22, 1853.

For the New England Farmer.

TO MAKE GOOD WALKS.

Two years ago, I tried an experiment for a walk in front of my house, which has proved very satisfactory. I removed the soil one foot in depth, and filled in small cobble stones. Then took coarse gravel, and with two riddle sieves sifted the coarse and fine from it, retaining the medium size. Then took equal parts of lime and cement, and mixed in as much as I could with the gravel. With a shovel and trowel I placed it down smooth, like plastering, one and a half inches in depth. In the spring, when it began to thaw daytimes and freeze nights, it flaked and crumbled about half an inch in depth, but has remained smooth and firm ever since. It is now very solid, and one of the most beautiful walks I know of. F. E. B.

Concord, 1853.

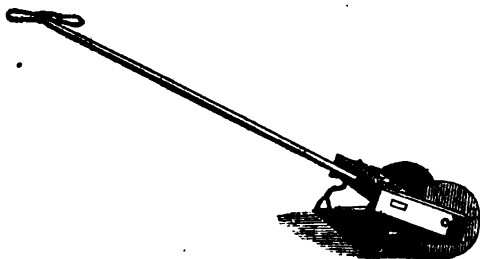
For the New England Farmer.

THE ONION WORM.

MR. BROWN:—Noticing the remarks on the onion worm in your July number, I had the impression that if living creatures of the insect tribe could live and exist on the onion, that tobacco could have no effect, but tried it effectually. When the onion had got to the size of a pipe stem, I found many of them laying prostrate on the bed, and a maggot in them one fourth of an inch in length. I obtained two quarts of tobacco liquor, and took out every defective onion and poured into the drill the liquor; then with the hose or the water pot sprinkled the whole bed, and now there is not a more thrifty bed of onions in "these dig-gins." U. S.

Sagamore Farm, Rye, N. H., Aug. 8, 1853.

A WHEEL HOE.



This implement, a figure of which we give above, is one which has for many years been in use among the thrifty farmers in Essex county, and particularly by those in the practice of raising large crops of onions. Nothing, probably, will ever supersede the use of the *hand hoe*; it is to the farmer, what the right hand is to the mechanic; although it may not do the work as fast as some other implement, no other can do it any better. It suits all places and conditions of soil, and must always remain an indispensable tool on the farm.— But the *wheel hoe* is more than “cousin german” to it; in good hands, it will perform five times as much service in a given period, and where everything is favorable, do it as well as the hand hoe. The figure is so plain that particular reference to its parts is unnecessary. The knife may be raised or lowered at will by turning the nuts on the screws,—and when worn down on one side reversed, and then is as good as ever. Our attention was called to the wheel hoe in one of the onion fields of Danvers, by Mr. PRACOR, of that town, a gentleman (though educated at the feet of Blackstone and my lord Coke,) full of enthusiasm in agricultural matters, and whose observing habits and ripe judgment render him eminently useful to the State. After seeing the beautiful appearance of the field where the hoe had been used, we ordered one, and in its daily use through the summer, find our expectations of its excellence fully realized. It is manufactured at Danvers by Mr. WILLIAM BERRY, and may be purchased of him for the low sum of one dollar and fifty cents at his shop.

For the New England Farmer.

BEES.

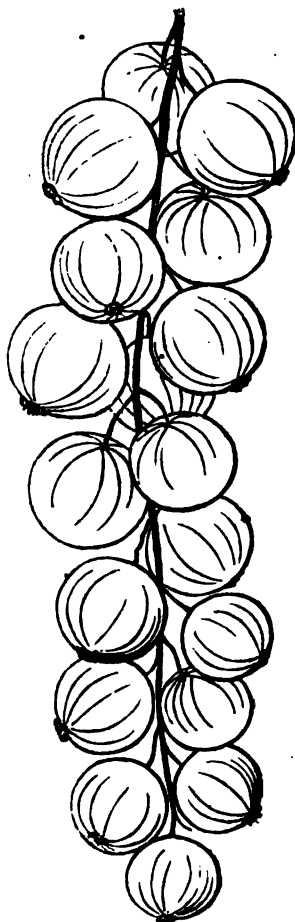
MESSES. EDITORS:—I have seen that your correspondents have made the *New England Farmer* a medium for communication, and suppose others enjoy the privilege of making inquiries. I have kept bees for several years, and they have been very profitable, but the two last seasons have been unfavorable to their increase, by swarming, and making honey sufficient even for themselves. Now, I have attributed the cause of their ill success, to the dry weather, and suppose wet seasons prolonging the blossom of flowers, are better adapted to the nature and growth of bees in our north New England States.

From the Elms.

MAY'S VICTORIA CURRANT.

“The luscious clusters of the vine
Upon my mouth do crush their wine.”

The currant is easily raised and propagated. They are highly relished by many people eaten from the bushes, and make a capital *jelly*, *shrub*, and *wine*. As an accompaniment to roasted or boiled poultry, lamb or mutton, the jelly is unrivalled. It is also excellent for persons of feeble appetite, and for tarts, &c. From the shrub may be prepared a healthful summer drink, a thousand times preferable to the *lemonade* made from *sulphuric acid*! A pleasant wine may also be made



from their expressed juice. In Deane's old “*New England Farmer* or *Georgical Dictionary*,” published in 1822, he says the wine from the *white* currant is far better than that from the red; that it ameliorates exceedingly by age, becoming equal to the best of *Malaga* wine, after being bottled a year or two.

The MAY'S VICTORIA is a new variety from England. The bunches are sometimes five inches long; the berries are large, bright red, excellent flavor, and hang long on the bush in perfection. Foliage thick deep green. Very fine.

Some handsome specimens of the CHERRY CURRANT have been exhibited at the rooms of the Mass. Horticultural Society the present season, but we are not sufficiently acquainted with its merits to recommend it. Its appearance was very fine.

THE THRIFTLESS FARMER.

The *Fort Wayne Times* gives the following life-like portrait of a "thriftless farmer:"—

The thriftless farmer, then, provides no shelter for his cattle, during the inclemency of the winter; but permits them to stand shivering by the side of a fence, or lie in the snow, as best suits them.

He throws their fodder on the ground, or in the mud, and not unfrequently in the highway; by which a large portion of it, and all the manure is wasted.

He grazes his meadows in fall and spring, by which they are gradually exhausted and finally ruined.

His fences are old and poor—just such as to let his neighbor's cattle break into his field, and teach his own to be unruly, and spoil his crops.

He neglects to keep the manure from around the sills of his barn—if he has one—by which they are prematurely rotted, and his barn destroyed.

He tills, or skims over the surface of his land, until it is exhausted; but never thinks it worth while to manure or clover it. For the first, he has no time, for the last, he "is not able."

He has a place for nothing, and nothing in its place. He consequently, wants a hoe or a rake or a hammer, or an augur, but knows not where to find them, and thus loses much time.

He loiters away stormy days and evenings when he should be repairing his utensils, or improving his mind by reading useful books, or newspapers.

He spends much time in town, at the corner of the street, or in the "snake holes," complaining of hard times," and goes home in the evening, "pretty well tore."

He has no shed for his fire wood—consequently his wife is out of humor, and his meals out of season.

He plants a few fruit trees, and his cattle forthwith destroys them. He "has no luck in raising fruit."

One-half of the little he raises is destroyed by his own or his neighbors' cattle.

His plow, drag, and other implements, lie all winter in the field where last used; and just as he is getting in a hurry, the next season, his plow breaks, because it was not housed and properly cared for.

Somebody's hogs break in, and destroy his garden, because he had not stopped a hole in the fence, that he had been intending to stop for a week.

He is often in a great hurry, but will stop and talk as long as he can find any one to talk with.

He has, of course, little money; and when he must raise some to pay his taxes, &c., he raises it at a great sacrifice, in some way or other, by paying an enormous shave, or by selling his scanty crop when prices are low.

He is a year behind, instead of being a year ahead of his business—and always will be.

When he pays a debt, it is at the end of an execution; consequently, his credit is at a low ebb.

He buys entirely on credit, and merchants and all others with whom he deals, charge him twice or thrice the profit they charge prompt paymasters, and are unwilling to sell him goods at cost. He has to beg and promise, and promise and beg, to get them on any terms. The merchants dread to see his wife come into their stores, and the poor woman feels depressed and degraded.

The smoke begins to come out of his chimney late of a winter's morning, while his cattle are suffering for their morning's feed.

Manure lies in heaps in his stable; his horses are rough and uncurried, and his harness trod under their feet.

His bars and gates are broken, his buildings unpainted, and the boards and shingles falling off—he has no time to replace them, the glass is out of the windows, and the holes stopped with rags and old hats.

He is a great borrower of his thrifty neighbor's implements, but never returns the borrowed article, and when it is sent for, it can't be found.

He is, in person, a great sloven, and never attends public worship; or if he does occasionally do so, he comes sneaking in when the service is half out.

He neglects his accounts, and when his neighbor calls to settle with him, has something else to attend to.

Take him all in all, he is a poor farmer, a poor husband, a poor father, a poor neighbor, and a poor Christian.

For the New England Farmer.

IMPROVEMENT AND HAYING.

MESSRS. EDITORS:—The twenty-fifth of July is calculated by astronomers as the commencement of "dog-days," and I suppose most farmers have finished haying, and the gathering of English grains; but the old native meadow is yet to be cut and secured in dog-day weather;

*When rain-drops lightly beat,
And the muggy winds do blow.*

The weather has been remarkably fine for haying in July, and I have cut and secured about forty tons of upland English grass, without having a single load of damaged hay. This morning I finished cutting a meadow that has been reclaimed; and gave a heavy crop of herdsgrass.

A few seasons ago, August and September, I thoroughly ditched, so as to drain the meadow, taking the mud to the barn-yard, for manure on upland, and on the sides of the meadow spreading gravel, and a coat of manure. The low parts we bogged, seeded with herdsgrass and clover, and have since manured. Now, on what was formerly light meadow hay, is cut a heavy sward of English herdsgrass. J.

From the Elms.

For the New England Farmer.

TO PREVENT BUGS FROM EATING VINES.

MR. EDITOR:—I have found by experience that bugs have a choice in what they eat; they prefer winter squashes to melons or cucumbers, and by planting squashes among the melons, they will be protected, the bugs preferring to commit their depredations on the squashes. S. E. HOOKER.

Poultney, Vt., 1853.

ACTION OF DROUGHT ON PLANTS.

The article below which we take from the *Mark Lane Express*, (an excellent agricultural and miscellaneous paper published in London,) could scarcely be more applicable to this meridian, if written expressly for it. It will come to us with peculiar force now, when nearly all our crops are suffering from a want of rain. We commend it to each of our readers, as affording a plausible theory why plants require so much water. It also affords strong arguments in favor of irrigation, especially in a climate like ours, where the three summer months are usually very dry and hot.

The specific action of drought on plants is one of the problems not yet entirely solved. Whether it is the indirect waste of moisture on the plants by evaporation, or the want of the due proportion of water necessary to build up the structure of plants, or whether it is some indirect action on the constituents of the soil, is by no means a settled question.

The present season has afforded abundant illustrations of the effect of want of moisture on the several plants the farmer has to cultivate; and what is more remarkable, the drought, though absolutely less than it was last year, seems to have had a far greater effect on the plants. The meadows especially appear to have suffered. In all the northern counties particularly, the grass crop is peculiarly affected. The finer and shorter grasses are absolutely either wanting, or so thin that they show the meadows to be without bottom grass. The coarser grasses are tall, but thin, and running to seed, forming no tillering stalks, and few blades in comparison to those of former years. The corn is the same—thin, stunted, and spiry in its character. There has been no tillering—no thick matted surface. The drills have been visible up to the present period, and the stems are fast running to ear before half the usual height is attained, being also hard and yellow in color, and as different as possible from the graceful flopping blade the wheat plant usually exhibits at this period.

Now, in what specific way has this drought so acted on the plants? In ordinary vegetables 90 per cent of their whole structure is simply water. Hence it is easy to conceive how large a quantity of that material is necessary during their growth and development. But there was no such absolute deficiency this season. The soil always contained a comparatively large amount of moisture: the dews were often plentiful, amounting to fully as much more as any diurnal development of the plant could require, and all the tables of rain fallen in the spring of this year, we have seen, showed a larger quantity than in the corresponding months of last year. Hence it seems we must look to the abstract cause of the injury—to something beyond the mere denuding of the plant of water, as such.

We think the theory of Liebig far better established this season. The plant, to take up its elements, must have them presented to it in a state of solution. The action of rain operates to dissolve regularly and gradually the material required by the plant, both in the soil and in the rocks from which the soil continually forming, by

disintegrating the small particles existing in the land. These are being supplied to the plant by the rains as it requires them, but this year they have not been so washed out and made ready for its use. But why did not the same cause operate equally in the spring of 1852? Simply because the incessant rains of the autumn and early winter had washed out the soluble constituents of the soil, so as to leave less free material in the land by far than in the previous spring, and hence the ordinary drought had much greater effect on the plants this year than it had last.

The effect of water on plants, regularly supplied, is most wonderful. Those who have seen the Clipston water meadows, and the small and clear stream, which produce from three to five crops of grass per annum, either depastured or mown, or partly the one and partly the other, must be convinced that it is almost as much owing to the plentiful supply of water in a dry season, as to any great amount of manure held by that small river in solution, that the vast increase of grass is produced. By watering, Mr. Kennedy, of Myremill, keeps close upon a thousand head of stock on 90 acres of Italian rye-grass. In ordinary seasons, from five to nine sheep can be kept on one acre of land; the latter may be done in a dropping season, on clover lays, on well-cultivated land; but with the aid of a little artificial food and by the application of liquid manure, in the shower form, by steam, Mr. Kennedy can keep fifty-six sheep per acre! Nor can we believe that this is altogether due to the manure. To that it is partly owing, doubtless; but it is by far more owing to its being watered with that manure in a soluble state, and so fit for the immediate use of the plants. Hence he is independent of season. The water-drill, to which we before alluded, is an application of the same principle; and the wonderful results of the dressing of dissolved bone liquid, in a dry season, by the Duke of Richmond, is a powerful fact in the same direction.

That it is the want of soluble manure, or, in other words, elements of plants, which is mainly the cause of the injury, is manifest from the fact that all the poorest land has suffered by far the most from the drought. The very highly manured land has sustained the least damage; while on land to which very highly soluble manures, Peruvian guano, for instance, and similar materials, have been applied, the crops are growing vigorously.

Nor let it be forgotten that the rain brings down the ammonia, which, in dry states of the atmosphere, will float undisturbed; and this failing, as well as the soluble supply below, would of course aggravate the cause of injury.

But what can now be done, with the meadows ripe, and not one-half or one-third of a crop? We say, free your pastures at once, and put in the whole of the stock, if rain has come, and eat up the meadows thoroughly bare. This will amply relieve the pastures, and afford them the chance of an entire new growth. The meadows, with their small produce, will soon be eaten up; and let a dressing of two or three cwt. of the best guano be then applied to them, and a beautiful new crop, and not very late, will yet be secured. The mowing machine and haymaker will soon get

it, even if it should clash with the harvest; but we are clear that on all kinds of land more produce, with the present crop given in, will be obtained by such a course, and the present crop will be very acceptable of itself. The fog, or aftermath, has also every prospect of being better after thus supplying the deficiency of the year.

For the New England Farmer.

HIGHWAYS—A BEAUTIFUL FEATURE.

MR. EDITOR:—In a recent excursion in my own vicinity, a few days since, I was gladdened by a prospect such as I had long desired to look upon in our hill country, but after years of patient wishing and waiting, had almost despaired of ever seeing, unless it were in anticipation. It was the beautiful sight of a highway free from all wandering animals, with no long furrows plowed on the sides of the travel path to produce a harvest of weeds, whose feathery seeds may be blown for miles, perhaps to vegetate and disfigure some field now smiling in fresh and valuable herbage; no deep gullies or dangerous ditches to disfigure the scenery, and render all "turning out" when two conveyances met, dangerous to the nerves, if not to the life and limbs of passengers, but a gentle sloping declivity, just enough to turn the water off. Then the grass, tall, beautiful grass, waving in the light breeze and reflecting bright jewels in the dew drops which hung upon it! how rich it looked, skirting that smooth, well-wrought highway!—and how beautiful the ground will look again, when the mower has smoothly shorn it of its heavy burthen and it is gathered into the garner, all fresh and green and lovely as the earliest herbage of spring.

It has been a source of continued wonder to me, that in a civilized age this street feeding should be tolerated at all. The practice has always looked as a relic of dark and barbarous times, originating and continued more from a desire to invade the rights of others, rather than in adopting the precept of doing justly and loving mercy. I rejoice to see the practice so far abandoned, as to develop some bright spots along our waysides.—While I feel a comfortable assurance that *no reasonable being*, where he once sees and experiences the benefits, will willingly return to the old way of turning sheep, geese, hogs, cattle, horses, pell-mell into the street, to the annoyance of everybody and the neighborhood in particular.

Then, when the streets are once cleared of these wandering, mischievous herds or collection of beasts that go about without owner and keeper to exhibit themselves, admitting themselves freely wherever they find a deficiency of fence, into the grain-field or mowing land of orderly and quiet citizens instead of taxing an admittance fee, what improvements in our highways may we not reasonably expect? Instead of the too common and disagreeable fallows left by the wayside, we shall see the sod remain firm and protected beyond the necessary requirements for the preservation of the road, rough places will be made smooth by the wayside as well as *in the way*, and handsomely laid to grass. Trees will be planted all along, and in variety as great as the neighboring woodlands will permit, giving shade to the traveller, beauty to the scenery, and furnishing subjects of various investigations, to awaken the mind and enrich the heart.

Then, too, if men cannot sit under their own vines and fig-trees with nothing to molest or make them afraid, they may stand a much better chance than we fear many now do, of retiring for the night, quiet in the reflection that the crops on which they have spent so much care, and which promise to repay their labor so generously, will not ere the morning, be destroyed by some troop of wandering animals.

I have not written supposing what I have seen is a solitary sight confined to a single town or neighborhood. There are many such places, but not all, and I have been induced to hold up this one example as a subject of imitation, to places where no such beauties mark the landscape, and encourage them to hasten the day when our country shall be free from a loathsome, disagreeable, unjust, unneighborly and unlawful practice.

Yours, truly,

W. B.

Elmwood, July 20, 1853.

For the New England Farmer.

GARDEN AND FIRE ENGINES.

MR. EDITOR:—In a late number of your paper, in a notice of a garden engine, you say "It will throw water to the height of forty feet, and to the distance of seventy feet horizontally. It may, therefore, be found of use in extinguishing fires in buildings." That remark is in accordance with the general belief of the use of such engines for extinguishing fires. I have no doubt but that if any twelve of your customers who live a mile from a large fire engine, should purchase a small one, and their buildings should take fire, they would at least, eleven of them, run for the large one at the village, and never once think of trying their own, or if they thought of it, would give it up as a foolish idea. A more mistaken idea than this, of fire engines, never entered the mind of man. Fire does not wait while we run for engines, but increases in arithmetical progression, and therefore if the engine you have described, will not put it out when first discovered, the largest in the world cannot, if we have to run but half a mile and it then has to be drawn to the fire. I want to see a better description of the new Hitchcock engine. I know its power, and I tell you it is to create an entire change in our fire departments. Hundreds of towns in the State cannot afford to purchase a large one, who could have half a dozen of these; and three of these at proper distances, are better than a large one, because so much sooner brought to work. Again, many towns who have the large ones should purchase small ones for the "outsiders," who pay their part of the expense while they are wholly unprotected. But enough for this time. If you please, I will again trouble you upon this important subject, and now only say that any of your friends who purchase the engine for garden purposes, will have a most useful and effectual fire engine. B.

Watertown, 1853.

REMARKS.—Having used the engine you speak of, and "knowing its power," we hope you will furnish the description which the public needs. The subject is one of importance to all, but especially to farmers, and we thank you for calling attention to it.

THE HIVE AND HONEY BEE.

This is the title of a new work on the Hive and Honey Bee, or a Manual for Bee-keepers, by Rev. L. L. LANGSTROTH, of Greenfield, Mass.

We have not only read the book, but conversed with the Author, with interest and delight. Huber, and several other writers on bees, were somewhat familiar to us, and we had mingled considerable practice with our reading and observation, and our conviction is, that the writer of this work understands the habits and wants of the Bee better than any other person who has written upon the subject. Huber devoted eight years to a study of them: our author has given a large portion of his time to this study for sixteen years, and during a considerable portion of the time has been a bee master, having a personal care of numerous swarms.

We can use no language more pleasant and appropriate than that used below by the *Christian Register*, in noticing this interesting book. It says:—"This treatise is written by one who evidently delights in his theme, whose failing health has compelled him to leave the field of theology for one of Natural History, but who finds there not less incitements to the highest sentiments. Every line has traces of being written *con amore*, (for the love of it.) The book will be interesting and valuable to two classes of readers. To those who delight in studies of natural history—and who should not! this work, and especially the first six chapters, which treat of the "manners and customs" and wonderful instincts of these little people, will be of special value. It details some facts which would be incredible did they not seem verified by careful experiment. It seems that if you adopt the same rule in treating with bees that Shakespeare recommended in treating with irascible and crusty people in general, you will never get stung—that is, always approach them after dinner. Bees on a full stomach are as harmless as so many flies, unless you insult them. The author says too—and he is borne out fully not only by his own observation but by good authority—that the queen bee and the worker, so vastly different in all their instincts and habits and their form and organization, are yet produced from the same kind of egg, all the difference being produced by the difference in the food given to the larvæ—a fact worth something in showing what circumstances can do in producing diversity of races.

"Another class of readers will value this book for its practical lessons in the management of bees. The author is the inventor of a new hive, which he thinks of very great value. The book is very full on the treatment, feeding and management of bees, and though we cannot judge of this portion from any experience we have had, we can yet say that the author writes like one who thoroughly understands his subject."

This week we give an extract, and take the statement of what may be done by the use of this hive.

L. L. LANGSTROTH'S MOVABLE COMB HIVE.

Patented, Oct. 5th, 1852.

Each comb in this hive is attached to a separate, movable frame, and in less than five minutes they may all be taken out, without cutting or injuring them, or at all enraging the bees. Weak stocks may be quickly strengthened by helping them to honey and maturing brood from stronger ones; queenless colonies may be rescued from certain ruin by supplying them with the means of obtaining another queen; and the ravages of the moth effectually prevented, as at any time the hive may be readily examined and all the worms, &c., removed from the combs. New colonies may be formed in less time than is usually required to hive a natural swarm; or the hive may be used as a non-swarm, or managed on the common swarming plan. The surplus honey may be taken from the interior of the hive on the frames or in upper boxes or glasses, in the most convenient, beautiful and saleable forms. Colonies may be safely transferred from any other hive to this, at any season of the year from April to October, as the brood, combs, honey and all the contents of the hive are transferred with them, and securely fastened in the frames. That the combs can always be removed from this hive in ease and safety, and that the new system, by giving perfect control over all the combs, effects a complete revolution in practical bee-keeping, the subscriber prefers to prove rather than assert.

Those who have any considerable number of bees, will find it to their interests to have at least one movable comb hive in their Apiary, from which they may, in a few minutes, supply any colony which has lost its queen, with the means of rearing another.

For the New England Farmer.

THE CANKER WORM.

MR. EDITOR:—In the last *Farmer* there is a description of the "Palmer worm," by Dr. Harris. According to his description of the insect they are the same worm which has committed such ravages in this section, and all through this region of country. They are known here by the name of "canker worm," and as near as our memory extends they are the same worm which made such destruction here in 1836. We have seen these worms in small numbers, several times since that period, but not to do any particular damage to trees. In the eastern part of this State, near the sea-shore, they have made their appearance several times in the last ten or twelve years. Being in the northern part of this State last week, (Winchester and Norfolk,) we found that there the worms had not troubled them at all. This goes to prove our previous convictions that this worm does most of its work near the sea-shore, extending some forty or fifty miles inland. From all accounts

and descriptions of this worm in different sections, the present year, this insect appears to be one and the same thing.

Now, whether this be the genuine canker or palmer worm, we cannot say. But one thing is certain, they are destructive everywhere, let them be called by one name or another. They make their appearance in this section, about the 6th or 10th of June, and by the 1st of July they are gone. They confined most of their work here, to the apple tree and shrub oak bushes, and this fact we remember, was the same in 1836. Now if Dr. Harris, or any one else, will give us the habits of both the palmer and canker worm, and wherein they differ in character, they will confer a great favor on the public. Yours truly, L. DURANT.

Derby, Ct., July 18, 1853.

For the New England Farmer.

TURNIPS AND GRASS SEED.

H. F. French, Esq., of Exeter, N. H., suggested in the *New England Farmer*, not long ago, what was to us a novel method of laying down land to grass. He says, "I last year laid down about a half acre with grass seed and English turnips, the last of July. Most of my turnip seed proved to be mustard, but not all, and I picked up between thirty and forty bushels of excellent turnips, with no extra labor or expense but the gathering. I did, however, apply one barrel of bone dust to the land, for the good of the turnip crop especially."

Mr. French does not say what grass seed he put upon it, or how it succeeded. We presume, however, that it was herds' grass and red top, as in another place he recommends sowing clover on the snows in spring, as clover, he says, is apt to die during the winter, when sowed in the fall.

I cut the above from the *Maine Farmer*, one of the best papers in the country. I am proud to be able to give its learned editor information, even upon a small matter. I did, as he supposes, sow herds' grass and red top, at the rate of about a half bushel of the former, and a bushel of the latter, to the acre, with the turnip seed, all mixed together, on the 28th day of July. The ground was so dry when I plowed that no moisture was perceptible at the bottom of a deep furrow. It was sowed, brushed and rolled, and left literally in dust and ashes (one barrel of bone dust to 25 bushels of ashes!) We had very little rain till the last week in August. The grass seed came up well, in the fall. I sowed clover seed on the snow in spring. The grass was cut last week, a heavy crop, more than half clover, at the rate of about two tons to the acre. This fact about the clover deserves notice. No clover seed was sowed last summer—the land had not been in grass for six years, and the clover did not grow from the seed sowed in the spring. Sowed in spring it does not head before haying time, and this clover was of full size, so as to lodge in spots. It must have grown from seed which had long laid in the ground, or what perhaps is more probable, which had been carried on in manure the year before I sowed it. No manure except the dust and ashes was applied in 1852, and there probably was no clover seed in that! One fact seems to be indicated by this experiment, namely, that clover sown in July does not always winter kill. I sowed one acre of new land with herds' grass seed and turnips, on the first day of the present July, with two bags of superphosphate

of lime, putting on at the same time, six pounds of clover. The turnips and grass seed are up and promise well. I omitted the red top, because it could not be procured at a reasonable price. Hay is worth sixteen dollars a ton here from the field, and turnips are valuable. Try the experiment. Any time before the middle of August, will be in season.

H. F. FRENCH.

Exeter N. H., July 18th, 1853.

AMMONIA.

We have been supplied by the Publisher with the sheets of a forthcoming work on the *Elements of Agricultural Chemistry*, by Prof. JOHNSON, of England. It treats upon the operations of the farm, and explains the nature of the substances used as fertilizers with more clearness than any other work we have seen. The language employed is simple, yet expressive, and any farmer will scarcely fail to find important aid, and much gratification, in frequent reference to its pages.

As there is much use made of the term, *ammonia*, we have selected a section briefly describing it, and stating its effects and value to the farmer. Next week we propose to give another extract on the "improvement of the soil by laying down lands to grass," and when the whole work is before us, shall speak of it more particularly.

It is to be published by SAXTON, the indefatigable Agricultural Publisher of New York.

OF AMMONIA, ITS PROPERTIES AND PRODUCTION IN NATURE.

If the sal-ammoniac, or the sulphate of ammonia of the shops, be mixed with quick-lime, a powerful odor is immediately perceived, and an invisible gas is given off, which strongly affects the eyes. This gas is ammonia. Water dissolves or absorbs it in very large quantity, and this solution of the gas in water forms the common hartshorn of the shops. The white solid smelling-salts of the shops (carbonate of ammonia) are a compound of ammonia with carbonic acid and a little water.

Ammonia consists of nitrogen and hydrogen only, in the proportion of 14 of the former to 3 of the latter by weight; or 17 lb. of ammonia contain 14 lb. of nitrogen and 3 lb. of hydrogen.

The decay of animal substances is an important natural source of this compound. During the putrefaction of dead animal bodies, ammonia is invariably given off. From the animal substances of the farm-yard it is evolved during their decay or putrefaction, as well as from all solid and liquid manures of animal origin.

Ammonia is naturally formed, also, during the decay of vegetable substances in the soil. This happens in one or other of three ways.

a. As in animal bodies, by the direct union of the nitrogen with a portion of the hydrogen of which they consist.

b. Or by the combination of a portion of the hydrogen of the decaying plants with the nitrogen of the air.

c. Or when they decompose in contact, at the same time, with both air and water—by their taking the oxygen of a quantity of the water, and

disposing its hydrogen at the moment of liberation, to combine with the nitrogen of the air, and form ammonia.

The production of ammonia by either of the two latter modes, takes place most abundantly when the oxygen of the air does not gain very ready access. Such are open subsoils in which vegetable matter abounds. And thus one of the benefits which follow from thorough draining and subsoil plowing is, that the roots penetrate and fill the subsoil with vegetable matter, which, by its decay in the confined atmosphere of the subsoil, gives rise to this production of ammonia. When thus formed in the soil, it is at once absorbed and retained by the humic and ulmic acids already described, renders them soluble, and enters with them into the roots of living plants.

Ammonia is also formed naturally during the chemical changes that are produced in volcanic countries, through the agency of subterranean fires. It escapes often in considerable quantities from the hot lavas, and from crevices in the heated rocks.

It is produced artificially by the distillation of animal substances, (hoofs, horns, &c.) and during the burning, coking, and distillation of coal. Soot contains much ammonia, while thousands of tons of that which is present in the ammoniacal liquors of the gas-works, and which might be beneficially applied as a manure, are annually carried down by the rivers, and lost in the sea.

Of the ammonia which is given off during the putrefaction of animal and vegetable substances, a variable proportion rises into the air, and floats into the atmosphere, till it is either decomposed by natural causes, or is dissolved and washed down by the rains. In the latter case it sinks into the ground, and finds its way into the roots of plants. In our climate, cultivated plants appear to derive a considerable proportion of their nitrogen from ammonia. It is one of the most valuable fertilizing substances contained in farm-yard manure; and as it is usually present in greater proportion in the liquid than in the solid contents of the farm-yard, much real wealth is lost, and the means of raising increased crops thrown away, in the quantities of liquid manure which are almost everywhere permitted to run to waste.

UNWORTHY BOOKS.

The *Western Plow-Boy*, published at Fort Wayne, Indiana, has received "*through the kindness of the publisher*," a copy in paper covers, of "*Lafitte*, or the *Pirate of the Gulf*," and gives it the best notice we have ever seen. We wish all editors had the courage to notice all books of that description in a similar manner. It shows the tendency of such writings, and closes its scathing criticism with the annexed paragraph:—

"We call attention to this subject, because we believe a light and corrupting literature, found both in books and newspapers, to be a serious and growing evil in our country; demanding the earnest consideration of all those who can reach and control, to any extent, the public mind. Ours is an excited age, and we want a literature that can soothe and steady as well as instruct the minds of the people."

SUMMER PRUNING OF THE GRAPE VINE.

The cultivation of the grape is as common as that of any plant that grows.

There is scarcely any one having a garden who does not consider this vine as one of the indispensables.

If he cannot raise one kind of grape, he can another, and there is no one but can raise to advantage the hardy and prolific native grape, the *Isabella*, for instance.

All native grapes are very luxuriant growers, throwing out shoots in one season, of from twenty to thirty feet in length, and producing a great mass of foliage.

The almost universal practice is to cut off all the shoots beyond the outer bunches of grapes, and to thin out a great portion of the foliage in other parts of the vine.

In fact to such a length do some operators carry this practice, that to see the vines soon after this "summer pruning" has taken place, one would almost suppose the poor vine was in the last stage of consumption, or to remind one very forcibly of a singed cat.

This operation is performed in the month of August, when the grapes are about the size of a pea.

The idea entertained and acted upon by these farmers is, that the growing fruit is robbed of its fair proportion of food, by letting too much young wood and foliage remain on the vine, and further, that it is absolutely necessary for the full development and maturity of the fruit, that the rays of the sun should in nowise be obstructed, but that each bunch should be fully exposed to its influence.

Now, for one, the writer thinks that if it is so necessary for the fruit to be exposed, nature would not cover it up so completely as she does with foliage. He does not believe in this assisting nature, as it is called.

It is a practice that, as men advance in knowledge and inquire into the rationality of things, will be exploded. It is already becoming every year more and more unpopular.

Dr. Findley, in a work published in 1843 on the subject, starts the following proposition:

1st. If all the leaves which a tree will naturally form are exposed to favorable influences, and receive the light of a brilliant sun, all the fruit which such a plant may produce will ripen perfectly in a summer that is long enough.

2nd. If all the leaves of a tree are exposed to such influences, all the fruit will advance as far towards ripening as the length of the summer will admit of; it may be sour and colorless, but that condition will be perfect of its kind.

3rd. But if all the fruit which a healthy tree will show is allowed to set, and a large part of the leaves are abstracted, such fruit, be the summer what it may, will never ripen.

4th. Therefore if a necessity exists for taking off a part of the leaves of a tree, a part of its fruit should also be destroyed.

5th. But, although a tree may be able to ripen all the fruit which it shows, yet such fruit will neither be so large nor so sweet under equal circumstances, as if a part of it is removed; because a tree only forms a certain amount of secretions, and if those secretions are divided among twenty

fruits instead of ten, each fruit will in the former case have but half the amount of nutrition, which it would have received in the latter case.

6th. The period of ripening in fruit will be accelerated by an abundant foliage, and retarded by a scarcity of foliage.

Dr. Lindley further states, that he considers these propositions as the expression of general truths, applicable in all cases, but especially to the vine.

If they are founded, as he believes, in well ascertained laws, then the rigorous summer pruning of the vine is totally wrong. He recommends, on the contrary, that not only should the whole crop of leaves be unpruned, but that the lateral shoots; always hitherto removed, should be allowed to remain; because all those laterals, if allowed to grow, would by the end of the season have contributed somewhat to the matter stored in the stem for the nutrition of the fruit; because the preparation of such matter would have been much more rapid; and because the ripening of the fruit, which depends on the presence of such matter, would have been in proportion to the rapidity of its formation.

"It is a mistake, continues he, to imagine that the sun must shine on the bunches of grapes in order to ripen them. Nature intended no such thing, when heavy clusters were caused to grow on slender stalks, and to hang below the foliage of branches, attached to trees by their strong and numerous tendrils. On the contrary, it is evident that vines naturally bear their fruit in such a way as to secure it from the sun; and man is most unwise when he harshly interferes with this intention. What is wanted is the full exposure of the LEAVES to the sun; they will prepare the nutriment of the grape—they will feed it, and nurse it, and eventually rear it up into succulence and lusciousness.

The same writer goes on to say:—"When, however, the branches have grown for many weeks, and are in autumn beginning to slacken in their power of lengthening, theory says, it is then right to stop the shoots by plucking off the ends, because after that season newly formed leaves have little time to do more than organize themselves, which must take place at the expense of matter forming in other leaves. Autumn stopping of the vine shoots is therefore not only unobjectionable, but advantageous, for the leaves which remain after that operation will then direct all their energy to the perfection of the grape."

Should the writer, by calling your attention to this subject, succeed in awakening the interest of the vine growers in this neighborhood, to the pernicious effects of summer pruning, he will be satisfied, and will conclude with a single remark—

If, as we are told, leaves are to the plant what lungs are to the human body, we cannot wonder that summer pruned grape vines resemble persons in the last stage of consumption.

T. M. WILTBORGER.

—West Philadelphian.

SINGULAR CIRCUMSTANCE.—One day last week, as some sawyers were engaged in sawing up an elm tree of extraordinary dimensions at the canal-wharf, near this city, they found a cavity, or decayed part, in the middle of the tree, and 30 feet at least from the top, in which was discovered the nest of a wood-pigeon, containing two eggs, which were

quite perfect, so far, at least, as regards outward appearance. One of the eggs was accidentally broken, but the other has been carefully preserved by Mr. Charles Pilling, clerk to Mr. George, slate and timber merchant, as a curiosity. The men who made the discovery were sadly puzzled to guess how the nest and eggs could by any possibility get into such a place, especially as it is a fact well known that the wood-pigeon never builds in the hollows of trees, but in the branches. The only manner in which we can account for this phenomenon is, that the bird built her nest and deposited her eggs in the fork of the tree, then deserting them, which this bird often does, and that the body of the tree, in its growth, closed around them, leaving the nest in the singular situation in which it was found. An immense space of time must have intervened since the eggs were thus deposited considering that, since that time, the body of the tree must have grown 30 feet or upwards in height. —*Hereford (English) Journal.*

For the New England Farmer.

A NEW SPECIES OF CANKER WORM.

MR. EDITOR:—We have noticed in this town a new species of worm, whose first appearance, to attract attention, was on apple and forest trees, particularly the oak. Where they work, the leaves of the trees lose their green appearance, as though scorched by fire. They appeared about the first of June, and by the last of the month had nearly all disappeared, leaving the effect of their destructive habits sadly visible. Some call them the *canker worm*, but they are quite a different worm from the canker worm which made such havoc in apple orchards about forty years ago. These worms are, when grown, a little over half an inch long; but the canker worm was full one inch long, and much larger and darker colored, and moved differently; but both were alike in providing themselves with a fine spun web, when they happen to fall by the shaking of the leaf or limb of the trees where they are eating. If the limb is jarred they fall suspended by this fine web; some fall one foot, some two, three or four feet, and then commence climbing up their rope like a good sailor, and regain their previous position.

I find by the papers that this worm has been noticed in different parts of this State, and some other States. If it increases next year, our forest and apple trees will meet with a destruction fearful to contemplate. In this part of the State, some forty years ago, the canker worm made such havoc of apple trees that owners of orchards thought the insect would finally destroy all our apple orchards. One farmer here, in the month of March, in order to get rid of the pest, cut off every limb of his apple trees, so that the worm could have no sustenance that year! But behold that season none were seen; they all disappeared, and have not made their appearance since. This was 39 years ago. So it was entirely needless for him to thus mutilate his apple trees at that time.

ISAAC STEVENS.

Mansfield, July 4th, 1853.

P. S. Destructive insects are very numerous here this year. I had growing in my garden a nice patch of parsnips for seed. Looking at them a week or two ago, I found the seed nearly destroyed by a fat looking worm, that by the aid of

his web wrapped the seed together and commenced eating away until the whole of the seed was destroyed. We picked them up, and upon breaking open the stalks, the pith was pretty well filled with the same kind of worm which destroyed the seed, and had also destroyed the pith of the plant.

I. S.

*For the New England Farmer.***CRANBERRY CULTURE.**

MR. EDITOR:—In company with a friend, I visited Mr. N.'s patch of cranberries, that have been under culture for four or five years past, and have been several times noticed in your journal. I found him busily occupied in clearing out all impediments to their growth, such as intruding grass, and weeds, and superfluous runners. Between the rows there appeared to be a dressing of light colored sand, on which the runners extended. Many of the rows were thickly matted, and fully covered with berries. Others had but few berries on them. Mr. N. explained this, as caused by severe frost, shortly after the growth of the vine started in the spring. He thought the crop would be diminished one-half from this cause. He also showed us berries that had a reddish color, and explained that this appearance was caused by a worm in the berry, which was apparent on opening it. He thought this worm was implanted in the fruit by an insect, not unlike the *yellow wasp*, but of smaller size. He had seen many of these, dodging about among the plants, and pointed out some while we were there. I speak of these facts in relation to his culture, because he has pursued the culture of this berry with better success than I have elsewhere known upon the upland. He has about half an acre under culture, a part of which has yielded berries for *five years*. He states that the produce the last season fully paid for the attention given to them—estimating the cranberries at *four dollars* per bushel. I can say, from my own knowledge, that the fruit was worth double that which is usually grown on meadow land. I consider the upland culture of the cranberry, as worthy of more attention than it has received. There is no vegetable grown that will find a readier market.

Danvers, July 14, 1853.

P.

*For the New England Farmer.***MILK AND BUTTER.**

MR. BROWN:—After seeing some butter stories in the papers, I thought I would give you an account of some of my butter and milk. I have a four year old cow, of the Webster stock, a cross of the Alderney blood, that for three weeks has averaged sixteen milk quarts per day, and as I am raising a heifer calf from her, I could set the milk only from night until morning, and from morning until night, then take the cream from it and give the milk to the calf. We made 24 lbs. butter daily, for some days, and after seeing the Springfield butter story, I set a quantity of milk for a proper time for the cream to rise, and to ascertain how much milk it would take for a pound of butter. From six quarts of milk I had 19 ounces of butter of the nicest quality. The feed for the cow was simply what grass she could get in a good pasture, and one quart of meal per day.

Yours truly, J. HATCH.

South Marshfield, 1853.

*For the New England Farmer.***TRANSACTIONS OF THE AGRICULTURAL SOCIETIES OF MASS.**

MR. EDITOR:—Within a few weeks past, there has issued from the press of White & Potter, State printers, a Volume of Transactions of the Agricultural Societies of the State of Massachusetts. The typographical execution of the volume is creditable to the press from which it has issued. The volume contains nearly eight hundred pages, and is a monument to the industry and perseverance of the Hon. AMASA WALKER, who acted as Secretary of the State Board of Agriculture, until a permanent Secretary was appointed in April last. It exhibits, too, the excellent judgment of the Hon. Secretary in the selections he has made from the various reports and addresses that were put into his hands. To the transactions of the various Agricultural Societies, which constitute the main body of the volume, are added the doings of the State Board of Agriculture, and the laws of the State in relation to Agricultural Societies.—Although these additions increase the size of the volume, yet they add much to its value, and we are glad to have the information they contain in such shape that we can conveniently refer to it.

I propose, Mr. Editor, to run over the volume and give your readers the benefit of such notes as I may make in my progress. I will endeavor to keep within reasonable limits, but should I become prosy and tedious, please exercise your editorial authority, and rap me over the knuckles, and I will take the hint. I have no idea how long it will take me, or how much I may say; but you and your readers have this circumstance in their favor, that dog days are not favorable to long disquisitions. But to my task; for I propose to make a beginning in this number, and in the first place, I notice that there is a full and accurate index, which much increases the value of the book, and adds very much to the convenience of using it.

In the next place, there is a list of Agricultural Societies of the State, and the times when their several exhibitions are to held in 1853. This is a convenient table of reference, and perhaps it would be well to republish it in your paper. It may save some thousands of your readers the necessity of asking, "when is our cattle show to be?" The first report is that of the Mass. Society for the Promotion of Agriculture. This is mostly occupied with statements respecting the Alderney stock imported by the society. The number of animals of this stock now in possession of the society is eleven.—They are represented as in a thriving condition, and as having endured, without inconvenience, the cold of the last winter. The report states "that nothing has occurred to throw any doubt on the character of this race, as a most excellent stock for the dairy."

We are somewhat surprised to learn that the President and Secretary, together with Mr. Motley, who has the care of the Alderney stock, have arrived at the conviction that the Ayrshire stock formerly imported by the society, has failed to give satisfaction, and that its importation has been of little or no advantage to our stock.

Now we had arrived at a different conclusion. So far as our observation extends, Ayrshire cows, whether full-blooded or crossed with the Durham or with the native stock, are held in high estima-

tion, especially by those farmers who make milk for the market. We believe the demand for this stock was never greater than at the present moment, and that it is now worth from ten to twenty per cent. more than any other stock in the market. We do not think that the butter-making qualities of this stock are equal to those of the Alderneys, but we do think that the quantity of milk they yield is greater than that yielded by them. We observe in this volume, that several of the premium cows in different parts of the State were Ayrshire cows, either full-blooded or mixed. The truth is, that in some sections of the State, the quality of the milk is more regarded than the number of quarts, while in other sections, quarts are of more importance than quality. Hence the difference of opinion with respect to different kinds of stock.

From the manner of the report, we should infer that some apology was thought necessary for importing the Alderney stock, and ceasing to make efforts to extend the culture of the Ayrshires. Now we don't think that any apology is needed. But rather that the society should import samples of all the good varieties with which they may become acquainted. We would gladly see specimens of all the good varieties known in the civilized world. One race may be better suited for one purpose, and another for another purpose. We cannot expect to find all the good qualities of the different kinds of stock, united in any one of them. One race is best for beef, another for milk, another for butter, another for the plow. Now, perhaps, by crossing these different races with each other, and with our native stock, we may obtain a variety that shall combine more good qualities than any one of them does at present; and indeed, unless we are much mistaken, some of our milk raisers are obtaining a fine variety from a cross between the Durhams and Ayrshires. We hope it will not be many years before the *mulctra fumantia* (foaming milk-pails) of Virgil will constitute the general rule, and not the exception, as at present, in all our dairies.

Concord, July 29.

J. B.

For the New England Farmer.

THE SWALLOWS.

MR. BROWN:—In the last *Farmer* you wished correspondents in different sections of the country, to note the time of the departure of the "swallows." Last year I noticed the barn swallow here, as late as the 25th to the 28th of August. I think I have seen the chimney swallow as late as the last of September, or middle of October. As to the bank swallow and martin swallow, I cannot say at what time they leave the north. Last year I had a visit of birds which you call the Labrador swallow. They came in numbers, and built about a dozen nests in the space of about ten by twelve feet, under a corn house. They left with their broods about the first week in August, and were not seen again that season. This year they came back and built about thirty nests in the same place. They left with their broods about the 15th of July, and probably will not be seen here again until next season.

These birds build a curious nest, mostly of mud, and when done it looks something like a hornet's nest, with a small hole left near the top just

large enough for the bird to enter. Most of these nests were near to each other, or joined together as near as they could well be. These birds are about the size of the common barn swallow, with a broad fan tail like the martin swallow. They appear to be very tame in their habits, as we could easily take them in their nests by a little caution. In the last four or five years we have had an occasional nest of these birds built under the eaves of the barn. But never did they come in any numbers until last season. During their stay here, particularly in the morning, they would fill the yard with their swift gyrations. And although, strictly speaking, the swallow is not a bird of song, their brisk clatter kept up together, is not dull music after all.

Whether these birds have bred in other places near here I cannot say, but am inclined to think they have not to any extent. Any further information in regard to the swallow, by you or any of your correspondents, would be gladly received.

Yours truly,

L. DURANT.

Derby, Ct., July 26, 1853.

Below we give another extract from "*The Elements of Agricultural Chemistry*," by Professor JOHNSTON, and soon to be published by SAXTON, of N. Y. We think the reader will find this, as well as the article last week on "*Ammonia*," as plain as a "pike staff."

LAYING DOWN TO GRASS.

IMPROVEMENT OF THE SOIL BY LAYING DOWN TO GRASS. FACTS WHICH HAVE BEEN ASCERTAINED.

On this subject, two facts seem to be pretty generally acknowledged.

First, That land laid down to artificial grasses for one, two, three, or more years, is in some degree rested or recruited, and is fitted for the better production of crops of corn. Letting it lie a year or two longer in grass, therefore, is one of the received modes of bringing back to a sound condition a soil that has been exhausted by injudicious cropping.

Second, That land thus laid down with artificial grasses diminishes in value again after two, three, or five years—more or less—and only by slow degrees acquires a thick sward of rich, nourishing natural herbage. Hence the opinion that grass land improves in quality the longer it is permitted to lie—the unwillingness to plow up old pasture—and the comparatively high rents which, in some parts of the country, old grass land is known to yield.

Granting that grass land does thus generally increase in value, three important facts must be borne in mind before we attempt to assign the cause of this improvement, or the circumstances under which it is likely to take place for the longest time and to the greatest extent.

1. The value of the grass in any given spot may increase for an indefinite period, but it will never improve beyond a certain extent—it will necessarily be limited, as all other crops are, by the quality of the land. Hence the mere laying down to grass will not make *all* land good, however long it may lie. The extensive commons, heaths, and wastes, which have been in grass from the most remote times, are evidence of this. They have,

in most cases, yielded so poor a natural herbage as to have been considered unworthy of being enclosed as permanent pasture.

2. Some grass-lands will retain the good condition they thus slowly acquire for a very long period, and *without manuring*—in the same way, and upon nearly the same principle, that some rich corn-lands have yielded successive crops for 100 years without manure. The rich grass-lands of England, and especially of Ireland, many of which have been in pasture from time immemorial, without receiving any known return for all they have yielded, are illustrations of this fact.

3. But others, if grazed, cropped with sheep, or cut for hay, will gradually deteriorate, unless some proper supply of manure be given to them—which required supply must vary with the nature of the soil, with the kind of stock fed upon it, and with the kind of treatment to which it has been subjected.

FORM WHICH THE IMPROVEMENT ASSUMES, AND HOW IT IS BROUGHT ABOUT.

In regard to the acknowledged benefit of laying down to grass, then, two points require consideration.

1. What form does it assume—and how is it effected?

The improvement takes place by the gradual accumulation of a dark-brown soil rich in vegetable matter, which soil thickens or deepens in proportion to the time during which it is allowed to lie in grass. It is a law of nature, that this accumulation takes place more rapidly in the temperate than in tropical climates, and it would appear as if the consequent darkening of the soil were intended, among other purposes, to enable it to absorb more of the sun's warmth, and thus more speedily to bring forward vegetation where the average temperature is low and the summers comparatively short.

If the soil be very light and sandy, the thickening of the vegetable matter is sooner arrested; if it be moderately heavy land, the improvement continues for a longer period: and some of the heaviest clays in England are known to bear the richest permanent pastures.

The soils formed on the surface of all our rich old pasture lands thus come to possess a remarkable degree of uniformity—both in physical character and in chemical composition. This uniformity they gradually acquire, even upon the stiff clays of the lias and Oxford clay, which originally, no doubt, have been left to natural pasture—as many clay lands still are—from the difficulty and expense of submitting them to arable culture.

2. How do they acquire this new character, and why is it the work of so much time.

When the young grass throws up its leaves into the air, from which it derives so much of its nourishment, it throws down its roots into the soil in quest of food of another kind. The leaves may be mown or cropped by animals, and carried off the field; but the roots remain in the soil, and, as they die, gradually fill its upper part with vegetable matter. On an average, the annual production of roots on old grass-land is equal to one-third or one-fourth of the weight of hay carried off*—though no doubt it varies much, both with

the kind of grass and with the kind of soil. When wheat is cut down, the quantity of straw left in the field, in the form of stubble and roots, is sometimes greater than the quantity carried off in the sheaf. Upon a grass field two or three tons of hay may be reaped from an acre, and therefore, from half a ton to a ton of dry roots is annually produced and left in the soil. If anything like this weight of roots die every year, in land kept in pasture, we can readily understand how the vegetable matter in the soil should gradually accumulate. In arable land this accumulation is prevented by the constant turning up of the soil, by which the fibrous roots, being exposed to the free access of air and moisture, are made to undergo a more rapid decomposition.

But the roots and leaves of the grasses contain earthy and saline matters also. Dry hay leaves from an eighth to a tenth part of its weight of ash when burned. Along with the dead vegetable matter of the soil, this inorganic matter also accumulates in the form of an exceedingly fine earthy powder; hence one cause of the universal fineness of the surface-mould of old grass-fields. The earthy portion of this inorganic matter consists chiefly of silica, lime, and magnesia, with scarcely a trace of alumina; so that, even on the stiffest clays, a surface soil may be ultimately formed, in which the quantity of alumina—the substance of clay—is comparatively small.

There are still other agencies at work, by which the surface of stiff soils is made to undergo a change. As the roots of the grasses penetrate into the clay, they more or less open up a way into it for the rains. Now, the rains in nearly all lands, when they have a passage downwards, have a tendency to carry down the clay with them. They do so, it has been observed, on sandy and peaty soils, and more quickly when these soils are laid down to grass. Hence the mechanical action of the rains—slowly in many localities, yet surely—has a tendency to lighten the surface soil, by removing a portion of its clay. They constitute one of those natural agencies by which, as elsewhere explained, important differences are ultimately established, almost everywhere, between the surface crop-bearing soil and the subsoil on which it rests.

But further, the heats of summer and the frosts of winter aid this slow alteration. In the extremes of heat and of cold, the soil contracts more than the roots of the grasses do; and similar, though less visible, differences take place during the striking changes of temperature which are experienced in our climate in the different parts of almost every day. When the rain falls, also, on the parched field, or when a thaw comes on in winter, the earth expands, while the roots of the grasses remained nearly fixed; hence the soil rises up among the leaves, mixes with the vegetable matter, and thus assists in the slow accumulation of a rich vegetable mould.

The reader may have witnessed in winter how, on a field or by a way-side, the earth rises above the stones, and appears inclined to cover them; he may even have seen, in a deserted and undisturbed highway, the stones gradually sinking and disappearing altogether, when the repetition of this alternate contraction and expansion of the soil for a succession of winters has increased, in a great

* See the Author's *Lectures on Agricultural Chemistry and Geology*, 3d edition.

degree, the effects which follow from a single accession of frosty weather.

So it is in the fields. And if a person skilled in the soils of a given district can make a guess at the time when a given field was laid down to grass, by the depth at which the stones are found beneath the surface, it is partly because this loosening and expansion of the soil, while the stones remain fixed, tends to throw the latter down by an almost imperceptible quantity every year that passes.

Such movements as these act in opening up the surface soil, in mixing it with the decaying vegetable matter, and in allowing the slow action of the rains gradually to give its earthy portion a lighter character. But with these, among other causes, conspires also the action of living animals. Few persons have followed the plow without occasionally observing the vast quantities of earth-worms with which some fields seem to be filled. On a close-shaven lawn, many have noticed the frequent little heaps of earth which these worms during the night have thrown out upon the grass. These and other minute animals are continually at work, especially beneath an undisturbed and grassy sward—and they nightly bring up from a considerable depth, and discharge on the surface, their burden of fine fertilizing loamy earth. Each of these burdens is an actual gain to the rich surface soil; and who can doubt that, in the lapse of years, the unseen and unappreciated labors of these insect tribes must both materially improve its quality and increase its depth? *

* In the *Prize Essays of the Highland Society* (vol. 1. p. 191,) the reader will find the testimony of a practical man that such was in reality the case, as observed by himself on part of his own farm in Roxburghshire.

NATIONAL AGRICULTURAL SOCIETY AND MOUNT VERNON.

We are happy to notice that the officers of the *National Agricultural Society* are promptly carrying out the objects proposed in one of the resolutions passed by the society at its last meeting in Washington. The suggestion, a most happy one we think, was made by the President, Col. WILDER, whose accustomed energy will see its accomplishment in good time.

A late *National Intelligencer* says:—"We learn that Mr. Loosing, the distinguished artist, is at the present moment occupied at Mount Vernon in taking a landscape view of the venerable mansion, and sketching some matters of interest connected with it, including the carved marble mantel, so beautifully sculptured with agricultural subjects. Mr. L. is employed in this duty by the United States Agricultural Society with a view to use his drawings in the designing of an ornamental diploma of membership. The idea is an excellent one, and we are satisfied that the Association could not, within the range of subjects which our country affords, have selected one more appropriate or acceptable to the followers of the virtuous vocation in the pursuit of which the Father of his Country manifested so great an interest, and which he so thoroughly understood."

INOCULATION—BUDDING.

The propagation of fruit is effected either by planting the germs, grafting or budding. Circumstances often render it necessary to adopt the first, and this necessity is generally encountered in newly settled regions where stocks and scions are not easily procured. It is also necessary for the nurseryman to sow seeds; but where one merely aims at securing an orchard—no matter what may be the description of the fruit, he can generally, with little trouble, procure the desired kinds in the immediate vicinity, and at less expense than he could possibly produce them himself, from seed. In raising trees from seed, no reliance whatever can be placed upon the truthfulness of the varieties. The seeds of the best russets, pippins, and Baldwins often produce inferior and even worthless varieties. This liability renders it necessary to graft or bud, upon stocks produced from such seeds, the kinds it is desirable to propagate. For this purpose grafting is, on several accounts, preferred to budding. Still it often happens that if one was desirous of propagating choice varieties of fruit when grafting cannot be performed, as in the summer season, when grafting is generally supposed to be impracticable, then budding comes to our assistance, and enables us to secure the results and advantages of grafting with comparatively little risk.

The bud, which, in this operation, supplies the place of the scion, may be considered as an embryo branch, characterized by its own peculiar structure and qualities and individual vitality; and when detached from its parent limb and set, according to certain rules of art, in a healthy branch, is capable of continued growth and a reproduction of its species. The time for performing the operation of budding, is regulated in a great measure by the condition of the tree, and the activity of its circulation. The cherry is often budded in June, but the apple, pear and other similar trees, are generally budded in August and September. One reason why budding has so frequently failed, is, that many attempt it at improper and unsuitable seasons, and when the new wood is so far advanced in the process of lignification, as to be incapable of forming or admitting new unions. Buds, however healthy, inserted under such circumstances, cannot, of course, succeed, and disgrace is brought upon the art when none is deserved. Whenever the bark is found to separate freely from the wood, buds, properly inserted, will always unite and grow, for the cambium, or new growth of wood, is then at that stage of formation most favorable to secure the inoculation of the bud, and consequently to secure its life.

On the subject of budding, we have had an infinite variety of rules laid down by those who profess to be experienced in the business. That

every young farmer, on commencing life, should adopt certain measures to secure a constant and liberal supply of wholesome fruit for the use and comfort of his household, is a proposition the truth of which no one will deny. Even if he restrict his efforts to the simple object of securing a domestic supply without reference to the project of marketing, the portion of his time employed therein, will be devoted to good advantage, and insure no insignificant gratification and profit in the end. But the ambition of most farmers will not be satisfied with this; they will desire to see thrifty orchards surrounding their homesteads, or crowning the summits of their gently swelling hills, the produce of which will secure them the means of living, and supply cash for their improvements on their estates. The cultivation of plums, pears, peaches, grapes, currants, gooseberries, raspberries, cherries, strawberries, cranberries, blackberries, etc. etc., ought always to be associated with that of apples, and in most sections, would be found more profitable than any branch of farming, or simple gardening, that could be introduced. There are few sections of our widely extended country in which most, if not all of the above mentioned fruits, do not flourish luxuriantly, requiring but little care after transplanting, and producing generally an abundance of luscious and saleable fruit. We hope, ere long, to see this department of domestic industry elevated to the rank and position it so eminently deserves.

We forbear to repeat any of the different modes of budding, now, but refer the reader to the previous columns of the *Farmer*, where he will find the whole subject minutely described, as well as in most of the books on the subject of fruits.

SALE OF EARL DUCIE'S STOCK.

24TH AND 25TH OF AUGUST.

The late lamented Earl Ducie having requested his executors to dispose of his Agricultural stock, Mr. Strafford has instructions to sell by auction, without any reserve, at Tortworth Court, Gloucestershire, on Wednesday and Thursday, the 24th and 25th days of August next, the entire and far-famed herd of Short-horned Cattle belonging to his lordship, consisting of upwards of sixty head of Bulls, Cows and Heifers, comprising the whole of the justly celebrated "Duchess" and "Oxford" tribes of Short-horns, which with the "Fourth Duke of York," were purchased at the late Mr. Bates's sale at Kirklevington, in 1850; also the "Duke of Glo'ster," and many other very promising young Bulls and Heifers bred from them, as well as others from the most celebrated herds in the kingdom; with the splendid flock of 800 South Down Sheep, bred from the renowned stock of His Grace the Duke of Richmond, Col. Kingcote, Capt. Pelham, Messrs. Ellman, Barclay, Harris, and others; since which have been used the very best Tups that could be obtained from Mr. Jonas Webb. Also, the unrivalled stock of Pigs, descended from the most distinguished breeds in the coun-

The character of the above stock may be estimated from the fact, that the originals of each breed were purchased without the slightest regard as to price, and will be found to comprise some of the most valuable animals in the United Kingdom; as such, they are especially deserving the attention of breeders in every part of the world.

For the New England Farmer.

A PROLIFIC MEADOW.

MR. BROWN:—It has become so common of late, to put on record all facts tending to show the decay of the potatoe, I think it but fair, when anything to the contrary appears, it should be stated. Yesterday after the refreshing showers of the morning, in company with a friend, himself a large and successful cultivator, I went to view a field of about four acres of potatoe, grown as follows. The ground on which they are growing, is meadow land, with a soil of the average depth of three or four feet. The main brook of the meadow has recently been cleaned, so that the surplus water runs off, leaving it firm enough to cart upon. It is covered with a soil of richest quality, more like the prairies of the west than anything I know hereabouts.

The cultivation was commenced by spreading a coating of manure on the grassy surface, dropping the seed among the manure, cutting ditches and covering the potatoe with the material taken therefrom, leaving the ground in beds about five feet wide, and three rows of potatoe in a bed. In this way the potatoe started into growth, and now cover the ground with a most luxuriant coating of vines. A part of these, the earliest kinds, have come to maturity, and yield a fair crop of superior quality. An adjoining piece of ground was cultivated in the same way, the last year, and when the crop was gathered, the vines and rubbish were thrown into the ditches, and the whole surface was levelled off, and sown with grass seed, herds grass, red top and clover, and the present season has yielded hay of good quality, to the amount of three tons to the acre, with a prospect of a second cutting of half as much more. The crop of potatoe grown the last year fully paid for all the labor applied. The first purchase of the land did not exceed twenty dollars per acre. If any one can show a grass field yielding as much, procured at an expense as moderate, I should like to see it. The proprietor has more than one hundred acres of similar meadow, that has heretofore yielded herbage of the coarsest kind; all of which he contemplates bringing into English mowing by this process. One peculiarity about this culture, *no hoeing* is needed. The few weeds that start are easily pulled up by the roots. My impression is, if the potato crop should be continued *two years*, the ground would be left in better condition, and be likely to remain redeemed. It will be observed that no coating of gravel or other material has been carried upon this meadow—nor does any appear to be needed. I forbear to name the proprietor, as he is abundantly capable of making his own statement, when disposed to do so.

July 27, 1853.

P.

REMARKS.—We have rarely received a communication in which we have been more interested, than in the above. Such an experiment, and its

intelligible announcement, will often do more good in its results, than a whole volume of learned argument. We are, therefore, particularly obliged to our observing correspondent, "P.," for enabling us to record it. The mode of culture will be certainly new to most persons, and its results must be satisfactory to all.

A NOVEL ENCOUNTER.

During an afternoon lately several of Mr. Rose's men, who were chattering together in that gentleman's stable-yard, in Pitt Street, became spectators of a singular conflict, the issue of which was the signal defeat and death of one of the combatants. A "clucking" hen was busy at work upon the dunghill, and had pursued her scratching vocation for some time, when a plump, sleek-skinned rat, about three parts grown, presented his whiskered face at a neighboring hole, and, after reconnoitering for awhile, ventured forth in search of food. Dame Tattle, viewing his presence in the light of a trespass upon her domains, ceased her scratching operations and prepared to dispute the rat's right to feed upon her territory, probably thinking the old feudal law would hold good in her case, that "He may take who has the power, and he may keep who can." With outspread wings and a look of fierce determination, her ladyship made a sudden advance upon the enemy, and, with a well-directed peck, inflicted a severe wound upon the back of the intruder. Smarting with pain, the rat turned upon the courageous dame, and forthwith a battle ensued, — peck for bite and bite for peck being the order of the day. The sharp beak of the hen fell "fast and furious upon the rat's carcase, and, finding himself coming off second best, he sprang from the midden; but the plucky dame, having got "her pecker up," pursued and again seized the fugitive, when the latter instantly turned and inflicted a savage bite upon the old lady's ornamental comb, completely severing that appendage in two. The hen, however, nothing daunted, followed up her success, and in a few minutes the luckless rat lay at her feet an "inanimate piece of clay," when chuckie returned to the dunghill, uttering, as she strode across the yard, triumphant "cackles." The spectators, who had been highly amused with the fight, then examined the remains of the rat, and, to their astonishment, it was ascertained that so furious and effectual had been the onslaught of Dame Tattle, that the varmint's legs had all been broken in the conflict. *Preston (English) Chronicle.*

For the New England Farmer.

TRIMMING PINES.

Mr. Brown:—I see of late there is an inquiry in regard to trimming pine trees, and will say that for the last few years I have been in the practice of transplanting white pine trees and trimming them. Some of those that I have trimmed, are young trees, from 5 to 10 or 12 years old; the time of trimming, from the time the buds are from 1 inch long to 6 or 8 inches, and they have generally healed over smooth without any pitch disfiguring the tree.

A. F.

North Reading, July 19, 1853.

LIST OF STATE FAIRS IN 1853.

Vermont, Montpelier.....	September 13, 14, 15.
Kentucky, Lexington.....	September 13, 14, 15, 16, 17.
New York, Saratoga.....	September 30, 21, 22, 23.
Ohio, Dayton.....	September 20, 21, 22, 23.
Pennsylvania, Pittsburgh.....	September 27, 28, 29, 30.
Michigan, Detroit.....	September 28, 29, 30.
Wisconsin, Watertown.....	October 4, 5, 6, 7.
New Hampshire, Manchester.....	October 5, 6, 7.
Indiana, Lafayette.....	October 11, 12, 13, 14.
Illinois, Springfield.....	October 11, 12, 13, 14.
North Carolina, Raleigh.....	October 18.
Maryland, ———.....	October 25, 26, 27, 28.
Virginia, Richmond.....	November 1, 2, 3.
Lower Canada.....	September 27 to 30.
Upper Canada.....	October 5 to 7.
Southern Central Ag. Society, Augusta, Geo.....	Oct. 17 to 20.

AGRICULTURAL EXHIBITIONS IN MASSACHUSETTS FOR 1853.

Worcester County Society.....	September 21, 22.
Norfolk County Society.....	September 27, 28.
Essex County Society.....	September 28, 29.
Housatonic Society.....	September 28, 29.
Worcester West County Society.....	September 30.
Bristol County Society.....	October 4, 5.
Middlesex County Society.....	October 4, 5.
Berkshire County Society.....	October 5, 6.
Plymouth County Society.....	October 6.
Franklin County Society.....	October 6, 7.
Barnstable County Society.....	October 7.
Hampshire, Franklin and Hampden Society.....	Oct. 11, 12.
Hampden County Society.....	October 13, 14.
Hampshire County Society.....	October 26.

TREES.

Persons who take no particular interest in improving the streets and spare ground in their gardens, hardly realise how soon they are repaid for the slight trouble of planting, and little subsequent care of watching the growth of shade trees. The first impulse in regard to tree planting seems to be checked by the thought that it will be so long before it will grow to a size to be serviceable. From our desk we can see five horse chestnut trees that were set out only five years ago, and they now throw a delightful shade, and pay for their original cost besides, in obviating the necessity for an awning, which disfigures a street, while a tree is an appropriate and delightful ornament, as well as protector from the sun.

There has been some question about what we shall do for fuel and shipbuilding when the forests within reasonable distance of the seaboard are all destroyed. A prudent foresight would suggest that forest trees should be planted; there will always be spots of land enough between our large towns and villages, to have a grove of such kinds of trees raised as are best adapted to the soil. We believe every town and city that has the land to spare, along the shores of New England, or within a few miles of our railways that connect with seaport towns, could add greatly to the value of their otherwise unoccupied lands, by planting forest trees.

Many a man in Essex County could, we are satisfied, secure a fortune to his son, if not to himself, by planting forest trees on his land, which would be used to build the future ships of the Merrimac. Some land might be taken for this purpose which is almost useless for anything else. And all land which is not profitable for other cultivation, should be brought into wood. The pine may be raised

from the seed to the height of ten feet in as many years, and to a size profitable for firewood in twenty years; and of course much sooner when transplanted; and these may be planted and will flourish in the poorest soil; that which is fit for nothing else. Between here and Plum Island, with a small outlay, pine trees might be set out and pine trees line the road side, on land which now yields little or nothing, which would furnish timber for spars and many other purposes, in the course of a few years; before the present generation of ship-builders and mast-makers have given place to their natural successors.

Every one that plants a tree invests its value in a bank which never breaks, and which pays good interest; while it lives it is grateful to the eye, and if cut down will always bring more than the original cost. Let every one that can, plant a fruit tree in his garden, and a shade tree on the way-side, and another on any spare spot for future use, and we shall not in future years, have to go to Maine or Georgia for fuel and ship timber, or depend on imported and half decayed fruit, from Jersey, New York and Pennsylvania.—*Newburyport Herald*.

For the New England Farmer.

THE WEATHER.

MR. EDITOR:—I see by your paper, and by others, that you have had severe drought in the last six weeks. I do not remember a season when vegetation of all kinds has continued to grow and flourish as it has here, thus far the present season. We had a fruitful rain here on Saturday, the 16th inst., from twelve till half past one o'clock. The streets and low grounds were completely flooded. Another fine shower we had on Wednesday morning, the 20th, and still another fine rain on Saturday the 23d. This morning, the 26th, another heavy shower of some two hours in length. We had in the two first weeks in the present month, ten days of as good hay weather as any farmer need ask for. So that haying and harvest have been but little retarded by rain. We think the grass crop is rather large in this section, while grain of all kinds has come in well. Corn never looked better at this season than now. But if we do not get a pinch of drought in the next six weeks here, I shall be mistaken.

Yours, &c.,
L. DURANT.

Derby, Ct., July 26, 1853.

For the New England Farmer.

PEAS—AN EXPERIMENT.

MR. EDITOR:—Being a genuine Yankee, and possessing that spirit of inquiry which, to so great a degree, characterizes them as a people, I was induced to try the following experiment with peas.

I planted in drills 2 feet apart, on land that was in corn the year previous, manuring one-third with decomposed stable manure, one-third with chip-manure and planted the other third without any.

Those, where the chip manure was used, were one-third heavier than those where no manure was used; and those where the stable manure was used, were twice as heavy; or in other words, where no manure was used they produced 3 parts, where the chip manure was used 4 parts, where the stable manure was used 6 parts.

Leviston, Falls, Me.

S. TENNEY.

For the New England Farmer.

GARGET IN COWS.

MR. EDITOR:—Seeing in one of the late numbers of the *Farmer* a question about garget in cows, I have taken the first opportunity while the rain is wetting our hay, to reply to the inquiry.

MR. COLE, in his "Diseases of Animals," page 239, says, "This disorder attacks the udders of cows, particularly young ones, after their first calving—or cows in high condition. The internal part of the udder becomes inflamed, generally in one part at first, but if not relieved, it often extends to the whole bag. It becomes tender, much swelled and feels hard and knotty. The milk coagulates, and is drawn off in thick masses, often bloody. The causes are too high feeding; allowing the cows to go dry too long; not drawing off the milk when the bag becomes full before calving; humors in the system that collect at this tender place; and taking cold." "For remedy," he says, "bleed, physic, give garget root either in their food, or use as a seton. Saltpetre, tobacco and urine, and vinegar or spirits as a wash."

I find that all farmers who feed high and depend principally on grain or green food for keeping their cows, are most troubled with this disease. It does not seem to be very dangerous to the general health of the cow but only injures or spoils the milk vessels. While visiting the farm of Hon. B. V. FRENCH, last winter, his foreman showed me a fine Devon cow that had brought three calves since her udder had been destroyed by garget, so that not a single gill of milk could be drawn away. Yet the cow enjoyed good health otherwise. A great many fine cows lose part of the bag, generally one quarter at a time. Now I should say that the garget is nothing more than long continued inflammation of the udder, caused by too great a flow of milk—for it is our best cows only, that are troubled in this way. A fat cow, or one that inclines more to take on fat than to "run to milk," seldom has this disease, except immediately after calving. A sudden change from poor to good feeding while the cow is thin of flesh, is generally the immediate cause of garget. Cows that are poor should be brought up to good feeding very gradually. If you feed fast you will soon be warned of danger, by fever in one or more parts of the udder, thick, and perhaps bloody milk. The first thing to do, is to take away all extra feed, draw off all the milk, and wash the fevered parts in cold spring or well water. You cannot wash or shower too much as long as the fever remains. Mr. French uses a small force pump. The amount of washing or showering, depends entirely on the severity of the case. If the cow has only just calved, it will often be brought down soft by the bunting of the calf, if you keep him a little hungry. Washing every morning and night will generally bring out the fever, but if a very bad case, wash twenty times if necessary.

We once stuffed cold wet moss all around the udder, and confined it by tying a blanket over the back and letting the cow remain in that "fix" over night.

If we will keep in good condition, feed regularly, milk clean, and use cold water in cases of fever, till the fever is gone, I think we need be troubled very little with cows having the garget.

Sheldonville, Mass.

A. W. C.

FOOD FOR CROPS.

This is the "*grand question*" among farmers at the present day. In new countries, where the land has not been cultivated much, little is thought about giving the crop any food, in order to make it into food for ourselves, but after the fresh soil has become exhausted by constant cropping—after the "*new*" is off, or rather *out*, the farmer finds, that to make food for himself, he must give food to the plants he wishes to raise.

Well what must it be? To answer it with perfect accuracy, you should first know what the soil is made of, and then what the plant is made of—or, in other words, both should be analyzed, and the ingredients ascertained, both as to their quality and quantity. But this requires a greater knowledge of practical chemistry than the majority of the people as yet possess, and also more expense than most farmers are able to meet.

What is the next best thing to be done? Fortunately the remains of organic bodies, (by which we mean those bodies both of animal and vegetable origin, that have had life and a set of organs forming their bodies,) possess most of the ingredients required for this purpose. Although some of these ingredients which make up the mass of organic manures may not be needed in this crop, they will not be lost, and will come in play for some future one.

We are aware that there is much said about specific manure, and this article and that article is loudly recommended as the very thing, and the only thing needed. We do not undervalue them, and at the same time we would caution our readers not to overvalue them. Watch all experiments—use everything of the specific kind, such as plaster, super-phosphate of lime, sulphate of ammonia, guano, &c., &c., as you know will be beneficial, but at the same time don't give up your manure heap.

As a general rule, the remains of manure, made from the remains of organic bodies the nearest related, that is the nearest in kind and quality to those which you wish to raise, will make the best manure for them. Return to the soil again, as much of the same crop as you can, in order to make another one.

Nature gives you this advice. How is it that yonder forest has kept up for so many years such a heavy crop of wood? How is it, that for as long as you can remember, there has not only been a heavy burthen of wood on that soil, but it has been constantly increasing in growth? It is manured every fall, as sure as the fall comes, by a thick deposit of leaves, and twigs, and small branches, which the frosts, and the winds and snow break off and spread around their roots. These leaves and twigs are made up of material, in part drawn from the soil, and in part drawn from the air, and of the same kind as the rest of the wood, and so they decay and supply food for the standing, growing wood.

The vine growers in some parts of France find the clippings and prunings of their vines to be a valuable dressing for their vineyards. The cotton growers of the south begin to find that the cotton seeds and refuse cotton is a valuable dressing for cotton plants.

Many of our farmers begin to find that the stalks and husks of Indian corn, ploughed under, make a

valuable manure for the corn crop, and that the prunings of the orchard, chipped up and applied to the trees from which they were taken, make a valuable dressing for the orchard.—*Maine Farmer*.

For the New England Farmer.

MOWING MACHINES.

MR. EDITOR:—It has long been the wish of farmers in New England, to see a mowing machine suitable for our small farms, and, after having tried one of the kinds now offered, I have concluded that none now made would answer. I was induced this spring, to try "Ketchum's," made by Howard, & Co., of Buffalo, and find that works well. I have tried it in thin "June grass," in clover and herdsgrass, both standing and lodged, and in coarse meadow grass, and it does the work fully equal to the best mowers. All who have seen it express this opinion. It works better on uneven ground than any one would suppose. It is strong and durable, and will, I think, be used successfully on nine-tenths of the mowing fields of New England if properly prepared.

The machine requires two good horses of even spirit, good life, weighing not less than 1000 lbs. The knives should be sharp, (though they leave no grass if dull) and the best of machinery oil should be used plentifully; the cost of oil is trifling compared to the expense of unnecessary friction. The driver should be a person of judgment, and observe the directions, which are few and simple. HON. SAMUEL D. HUBBARD, of the city of Middletown, uses his with a yoke of oxen.

I can in three hours cut over as much surface as five men usually mow in the forenoon. And in one and one-half hours, I can rake it all, with Delano's Independent Horse Rake, which is very far superior to any kind now in use. Requiring not half the attendance in labor, does the work better, and leaves the hay much lighter than the revolving rake. It has all the advantages of all the other kinds and none of the disadvantages.

In raking hay mowed by a machine, the rake should go in the same direction of the mowing machine or directly across the snaths.

DAVID LYMAN.

Middletown, Ct., July 26, 1853.

REMARKS.—The mowing machine is an implement of great importance to the farmer, and, ere long, will be in use in most neighborhoods of progressive and intelligent cultivators. In our weekly number of July 10, 1852, and in the *Monthly Farmer* for August, 1852, we gave a figure of the mowing machine spoken of by our correspondent, and appended some remarks. We believe there is plenty of land sufficiently level in nearly every neighborhood, to justify the purchase of a mowing machine. This might be done by several persons owning it jointly, and the expense of cutting their grass materially reduced. We hope to see one in use among us soon.

✂ A pear bud inserted into a quince stock last August, by M. D. Eaton, of Barre, has grown eleven feet and seven inches.

THOROUGH BRED AYRSHIRE BULL, PRINCE ALBERT.

This engraving is a fine portrait of an Ayrshire Bull, the property of Mr. JOHN RAYNOLDS, one of the proprietors of the *Farmer*. He is three years old, of a dark brown color, becoming almost black on some parts, and beautifully dappled. The white parts are studded with small spots of mingled black and brown of varied shades. His disposition is gentle, so that he is handled and controlled with ease, while he is almost as agile as a cat.

In a "Treatise on the Dairy Breed of Cows," by Mr. ARRON, one of the best writers on cattle, he describes the Ayrshire breed as follows:—

"The shapes most approved of, are, head small, but rather long and narrow at the muzzle; the eye small, but smart and lively; the horns small, clear, crooked, and their roots at considerable distance from each other; neck long and slender, tapering toward the head, with no loose skin below; shoulders thin; fore-quarters light; hind-quarters large; back straight, broad behind, the joints rather loose and open; carcass deep, and pelvis capacious, and wide over the hips, with round fleshy buttocks; tail long and small; legs small and short, with firm joints; udder capacious, broad and square, stretching forward, and neither fleshy, low hung, nor loose; the milk veins large and prominent; teats short, all pointing outward, and at considerable distance from each other; skin thin and loose; hair soft and woolly. The head, bones, horns, and all parts of least value, small; and the general figure compact and well proportioned." Mr. RANKINE very properly remarks, that, "compared with other improved breeds, the thighs, or what is called the twist of the Ayrshire cow, are thin. She is, characteristically, not a fleshy animal."

In the edition of YOUTT and MARTIN on Cattle, published by SAXTON, N. Y., they state that the

breed has much improved since Mr. ALTON described it, and is short in the leg, the neck a little shorter at the shoulder, but finely shaped toward the head; the horns smaller than those of the Highlander, but clear and smooth, pointing forward, turning upward, and tapering to a point. They are deep in the carcass, but not round and ample, and especially not so in the loins and haunches. Some, however, have suspected, and not without reason, that an attention to the shape and beauty, and an attempt to produce fat and sleeky cattle, which may be admired at the show, has a tendency to improve what is only their quality as grazing cattle—and that at the certainty of diminishing their value as milkers.

The excellency of a dairy cow is estimated by the quantity and quality of her milk. The quantity yielded by the Ayrshire cow, is, considering her size, very great. Five gallons daily, for two or three months after calving, may be considered as not more than an average quantity. Three gallons daily will be given for the next three months, and one gallon and a half during the succeeding four months. This would amount to more than 850 gallons; but allowing for some unproductive cows, 600 gallons per year may be the average quantity annually from each cow.

Several importations of Ayrshire cattle have been made, and enough of them, we hope, are now among our people to afford a fair trial of their qualities, both for milk and beef. There will be a tendency to over-feed, at first, which must be guarded against, or their true qualities when kept on the common feed of the farms will not be fairly tested. Prince Albert is one of the finest bulls

we have ever seen, and may be examined at the stable of the proprietor, near the depot in Concord.

For the New England Farmer.

ANALYZING SOILS—FARMING SCIENCE, &C.

MR. EDITOR:—At the present day much is written and said about analyzing soils on the farm. Some contend that each barren field should have its soil analyzed, and then what ingredients are wanting to make it productive might be easily added in the shape of "special manures," and then, as each field could be gone over with, the whole farm would be renovated. While others say that an analysis of soil is very well in its way, and is important, yet no cultivator must expect that from a simple analysis he can go forward and make his barren fields at once highly productive by adding a few mineral manures. This latter doctrine looks much the most reasonable of the two to any candid, well-meaning, practical cultivator. This bringing up a "barren field" to a high or good state of cultivation in a few weeks, in the way we have named, is but a *humbug*, and it is just as well to say so in the first place, as to *mince matters* about it hereafter. All real, substantial farm improvements are brought about gradually, from year to year; although it is not necessary, always, that a farmer should be a certain number of years in renovating a barren field. Of course much of this will depend on the means, skill and manner in which the farmer manages to bring about the improvement. But the only sure way to have these improvements thorough is for the farmer to spend a short life in practical labor on the farm, in connexion with a large share of patience, perseverance, cares, troubles and disappointments from all quarters; if he can live above all these, and still keep his eye on the main chance, improvement, all will come out right in the end.—But we have plenty of "agricultural chemists" now, who tell us that the best way to improve our worn-out lands is, to send them a specimen of soil for analysis, and they will sell us a special manure which will restore it, and that, too, at a much cheaper rate than by the ordinary way of farm improvements.

But there seems to be a clashing of ideas among the "chemical manure operators" themselves in this business. Hence we see one of these men advertises the "Superphosphate of Lime," as manufactured by him, to be a great fertilizer. Reading on still further down the column, we find another advertisement headed the "Improved Superphosphate of Lime," which is manufactured by the subscriber at so much per hundred or ton, warranted a pure and good article, &c. We have no doubt but this is a very good special manure, if well made. So is Guano, Poudrette, Gypsum, Bone-dust, and many other kinds of these manures. But when the manufacturers of these *patent manures* tell the farmers that for ordinary farming purposes they are cheaper and better than barn-yard manure, they are telling that of which there is no truth in, to say the least of it.

While on this point, we cannot do better than to give an extract from the late Prof. Norton's address before the New York State Society, in 1848.

"It will have been noticed, perhaps, that I have during all my remarks spoken of inorganic and or-

ganic manures as alike necessary; this may have seemed strange to those who have seen many of the views now entertained by others on these points. No agricultural questions have been more vexed. At first we were required by a high authority to fasten our faith upon 'ammonia' alone; if we succeeded in adding that to the soil, the work was nearly all done. Within the last two or three years, however, a wonderful change has occurred; the same high authority assures us that all our trouble in trying to catch ammonia, our precautions to prevent its escape have been, perhaps, not exactly useless, but rather unnecessary, for inorganic manures are what we want; ammonia is very good, but there is an abundance of it in the soil already. The ammonia theory was very beautiful, and was received with great eagerness, but by the time that the mineral manure theory appeared, many had tired of nothing but mineral, others were disappointed in their expectations of success through its use, and all of these turned naturally to the new light. In England, specific mineral manures were patented, which were to work wonders under all circumstances. There was a manure for wheat, one for oats, one for turnips, and so on, all infallible. It is just to say that there is no doubt but many of these extravagancies were put forth by interested parties in England, without the knowledge of the inventor. Those who have preserved the English agricultural papers during the last few years, cannot have failed to perceive how general has been the disappointment in the use of these manures, and how much harm has resulted to the cause of rational improvement."

Without doubt Prof. Norton had particular reference to the great German chemist, Liebig, who was, we believe, the great author and leader of the ammonia theory, as he is now of the special manure theory.

After reading such language, from the source whence it comes, we ask every candid, thinking man or farmer to judge for himself, and see how far it will do to trust these special manures to do up the work of farm improvement. On the point of the analysis of soils, Prof. Norton is equally explicit. In fact, we have no confidence ourselves in farmers turning chemists, or that they can learn to analyze a soil in three or four weeks' practice, nor any thing like it. The analysing of soils is a nice business, which belongs strictly to the laboratory, to the student and practical chemist, of which a two years' course of study and practice is a short time enough for the most quick and expert scholar to make a good and thorough analysis.—And if an analysis is not a thorough and correct one, what is it good for, only to lead the farmer further in the dark. In Prof. Norton's "Elements of Scientific Agriculture and Scientific Farming," in the chapter on Chemical Analyses, he says:

"Among all of the subjects that have been presented to the consideration of farmers, since the work of agricultural improvement commenced, none has been less understood even by many of those who have pretended to be its expounders, than that of analytical chemistry as applied to agriculture. Many authors and speakers have labored to establish it as a fact that there is no difficulty in chemical investigations beyond what may be overcome by a few days of study; thus a large portion of the farming community have been led

into the belief that when proper institutions are established, they themselves, or at least their children, may in a few weeks' time do all of their own analytical work, just as well as the most accomplished chemist can do it. That such ideas as these are totally at variance with the truth, none who have ever studied the subject thoroughly can for a moment doubt. It is a perfectly safe conclusion, when any man asserts, for instance, the entire simplicity and ease of analyzing a soil, that his analyses would not be of a very accurate description. Chemistry is a science that must be studied earnestly and perseveringly, just like any other branch of knowledge which has a wide range. In order to know what is in a soil, and to determine what are the quantities of its constituents, an intimate acquaintance is necessary not only with the substances themselves in their almost endless relations and changes, but with great numbers of other substances from which they must be distinguished, and with which they are likely to be confounded by an inexperienced person. We can determine quantities by means of certain chemical processes; most of these depend on the addition of other bodies to a solution in which are dissolved those that we wish to separate. Suppose now these bodies which are thus added to be impure; obviously the whole result will be erroneous. The chemist then must know how to distinguish with certainty between pure and impure substances, and to tell what the impurities are. When he knows all of these things, there are still a great number of minor but very important points, that require attention. He must use absolutely purer water, must filter his liquids through paper that has very little ash, and must weigh every thing upon a balance that is sensitive to at least the tenth of a grain. I might go on and mention other requisites necessary to a good analysis; but those already noted are sufficient to show that greater care, skill and experience are absolutely essential in this business, that un-instructed persons must constantly be making mistakes of the most flagrant description. The worst difficulty of all is, that in many cases not having even knowledge enough to know when they have gone astray, they actually rely upon their work as trustworthy, and lead others to do so too. Results produced by such deficient are unhappily too common, and are always productive of harm wherever they go. The farmer who knows little or nothing of even chemical names, perhaps is not competent to judge of a good analysis; he cannot tell the difference between a pretender to scientific knowledge and one who really knows something that is true and valuable. He takes these erroneous analyses as his guide, and probably falls at once into some serious mistake by attempting to alter the supposed constitution of his soil. After he has been disappointed in this way a few times, he is very apt to condemn all scientific agriculture as ridiculous and of no avail for any practical purpose. There is truth in science, but it is not every one who can draw it out, and the proper course in cases of an unsatisfactory nature is to distrust the man and not the general principles."

After reading language of this kind, from such authority, who can doubt the truth of such statements? And how much more difficult it is to have a good analysis of soils made than most of us would be willing to believe. After all, practical

scientific farming does not depend on how many analyses of soils a farmer can have made on his farm, though this may be all very well in its way, if they are well done. But a great deal more depends on the practical knowledge which the thinking farmer brings into his business by testing theories and trying experiments of all kinds on his farm. It is the every-day practical working farmer who should study and learn this science by actual heart and hand labor joined together.

Agricultural institutes, when they are founded on the right grounds, will be great helps in this business, and we think a few years hence will see them established. Still we are satisfied that if the great mass of working farmers are ever made scientific, improving farmers at all, it must be something after the plan we have named above.

Yours truly,
Derby, Conn., 1853. L. DURAND.

For the New England Farmer.

THE MARROW SQUASH.

FRIEND BROWN:—I am desirous of obtaining some information of you or some of your correspondents for removing a difficulty in the cultivation of the marrow squash. Some years I have planted them and they have done well, but for a few seasons past there has been with me almost an entire failure. This season I again planted them, and they came up well and grew finely; then came the bugs, and quite a labor I had of exterminating them; then I expected there would be nothing to check their growth, and accordingly looked forward to a plentiful harvest. But herein I was disappointed; for about the time they put forth their runners they began to turn yellow, wither and die. So at present, from quite a large patch, I have very few vines remaining, and am daily expecting the rest will go the same way.

I pulled up some of the withered vines and examined the roots closely, but found them not injured by worms, but changed to a yellowish, watery hue, which seemed the disease must originate there. If a remedy can be found that will obviate the difficulty, quite a favor will be conferred.

Yours truly, M. TENNY.
South Groton, 1853.

THE CROPS.

MR. REED, Editor of the *Cultivator and Gazette*, Pittsfield, says:—

We spent the last week among the fields of wheat, rye, barley and oats in the south part of the county. The expression often meets us, "we never raised so large a crop before;" and we can truly say that if such crops can be produced in old Berkshire, there is but little use, or certainly but little necessity for her sons to leave the homes of their fathers to seek a more productive land. The winter grain, both wheat and rye, is very heavy. Most of the rye and some of the wheat south of Stockbridge was cut during the last week, and some of it put in the barn. The grass crop is not as good as the grain, but it appears to us about an average with a series of years,—better by far than last year, not as good as in some other years.—Corn now looks well, very unusually well for the season. For fruit, the prospect appears rather dark, especially for the fruit of fruits,—the apple.

Very few trees give any hope of a harvest. Cherries are as abundant as we have the sun, and are very glad to see attention paid to this fruit, excellent for all the purposes of dessert and cooking. The kind most abundant are the small black and red English, but the large and choice varieties are beginning to be cultivated to a considerable extent. Of pears, plums, peaches and quinces there is a prospect of about an usual amount, but what will come to maturity no one can tell.

SHELTER.

In New England, most persons appreciate the advantages of shelter, for themselves and their animals. The importance of hiding from "the peltings of the pitiless storm," beneath tight roofs, for his family and his cattle, is better understood by the farmers among us, than by those of the West and the South. We take considerable care so to arrange our barns, as to form sunny nooks, for the comfort of our cattle in winter. Few, perhaps, give due attention to their gardens and fruit orchards, although no observing man has failed to notice the necessity of shelter for plants not of hardy growth. The Isabella grape ripens but once in four or five years in exposed positions in most of New England, while against a wall or building, with a southern exposure, and protected from cold winds, it may usually be perfected.

All running vines, such as squashes, melons, and the like, are liable to be torn in pieces and ruined, by the high winds which prevail in early summer. The leaves even of elms and maples, standing singly, are often so torn by the wind when they are young and tender, as to retain traces of the injury throughout the season.

The common mode of sheltering gardens among us, is by the erection of high close fences. This is, perhaps, more effectual for small enclosures, than any other mode. It is too expensive, where lumber is scarce, and for large tracts, in many positions, is not practicable. A fence six feet high, may sufficiently protect a garden of a half acre, but for a tract of five acres, in an exposed place, it would be entirely inadequate. Again, there are many situations, where a fence is a great deformity. Indeed, we can hardly mention a particular, in which a want of good taste is more often manifested, than in cutting up grounds immediately about our dwellings, into small enclosures.

By systematic attention to this subject, in the substitution of belts of trees, instead of board fences, especially on grounds newly laid out for garden or ornamental culture, much expense of money may be saved, and a fine effect at the same time produced.

The *Horticulturist* for August has an excellent article upon this subject, although, in some particulars, we must venture to differ with the editor. He recommends, for the purpose of protection, the European Larch, the Norway Spruce and the Hemlock

Spruce, or common hemlock. To these we have no objection where they can be procured, and successfully transplanted. He also names the Lombardy Poplar and snowy Abell, which is known, also, as the Silver-leaf Poplar.

Against the use of the two latter, we must enter our protest. The Lombardy Poplar, in New England, is a thin, tender, unhealthy tree. Its introduction, about fifty years ago, was a decided misfortune to the country. It was generally planted because of its quick growth and foreign appearance, and after occupying the place of our own beautiful forest trees for many years, it has at length been scouted from good society, and given place to the elm and maple. The Silver-leaf Poplar is a fast growing and beautiful tree, but like the Lombardy, constantly throws up suckers from the root. A belt of either of these trees would, in a short time, without great care, appropriate a whole farm. It is not unusual to see the Abell throw up suckers, at thirty or forty feet from its trunk. A single tree of the variety often proves a serious nuisance, in well kept grounds.

For New England, generally, for shelter to large tracts, especially of plain land, the *White Pine*, we think, by far the best tree. Planted in double or triple rows, at five or six feet high as they may be, they form at once a sufficient barrier for the protection of an extent of many rods, and in a few years will modify the temperature for a great distance. The *White Pine* never throws up a shoot from its root. It is destroyed at once, if you desire its extermination, by cutting off at the ground. Its roots are easily severed by the plow, and so may be kept within proper bounds, and although beauty is a matter of taste, to our eye no tree exceeds in beauty "the evergreen pine."

The effect of belts of the *Pine*, as boundaries of neighboring owners, or divisional lines between the useful and ornamental in tastefully cultivated grounds, is like that of beautiful frames upon valuable pictures, giving a finished appearance which cannot be otherwise produced. All vegetable growth, more or less, exhausts the ground, and this consideration should always be weighed, in determining our choice between living and dead fences.

We do not advise the indiscriminate use of hedges or barriers of trees, instead of stone walls and board fences, but would suggest to our readers, that in many cases a little thought on this subject may at least add much to the beauty of their homes.

POTATO ROT.—There is no doubt but this scourge has appeared again. One of the West Cambridge market gardeners has stated to us that he had seen them dug and lying rotten in large heaps, and that a neighbor had abandoned a field where he expected to gather four to six hundred bushels.

For the New England Farmer.

INQUIRIES ABOUT SWINE, BREEDING SOWS, SHEEP, PLOWING, MANURES.

FRIEND BROWN:—Permit me through the columns of the *Farmer* to make the following inquiries.

1. What is the best breed of swine for farmers to keep; having for their object the rearing of pigs and pork for marketing?

2. What is the best way to manage a breeding sow, from the beginning to the time of weaning the pigs?

3. What breed of sheep is in your opinion the most profitable for light land?

4. As I am on a farm that has been cultivated for many years, and has never been plowed more than four or five inches deep, would it be advisable to deepen the soil at once to seven or eight inches?

5. Will it pay for farmers to buy manure, and if so what kind will pay the best?

6. What kind of a plow should I use on my land? It is very level, and smooth, and a lightish sandy loam.

Please answer the above questions and oblige

Yours truly,

JOHN DIMON.

Wakefield, R. L., July, 1853.

REMARKS.—1. Some of the swine called "native," possess as good points, and are as handsome every way, as any we have ever seen. It is possible they had a touch of foreign blood, but was supposed they had not. "They are prolific breeders, and make as "good pork as ever swelled in a pot," but were great feeders. A cross of such swine with the pure Suffolk, would probably give a breed that would be sufficiently hardy, quiet and easy to take on fat, moderate feeders, and yet rapid growers, and possessing all the qualities to make them as valuable as any breed now known among us. It is difficult to breed freely from the pure Suffolks, as they are a little too tender for our climate, kept as our farmers generally keep their swine.—There is no difficulty in obtaining such a cross as will give all the desirable points.

2. Breeding sows should have plenty of room, with a dry, warm bed, and access to the ground; fed moderately, a portion of the food being green and succulent, such as grass and weeds.

A week or two before the time for dropping the pigs, most of the straw and litter should be gradually withdrawn from the sleeping apartment, and the animal fed occasionally with bits of fresh meat, or scraps. After having dropt her pigs, if she refuses to let them suck, and is disposed to injure them, throw her on her side carefully, and tie her legs; having allowed the pigs all to suck, untie her and she will treat them in a manner highly "becoming to all nursing mothers." Brood sows, particularly, should be made docile by gentle treatment, and regular and sufficient feeding. Many of them are as ferocious as a hyena, and destroy many of their young in their anxiety to protect them.

3. Among us we have the native breeds of sheep, also the Leicesters, the Bakewells, the South-

Downs, the Merinos, Saxon-breeds, and more recently, the French sheep, and there are others under different names. It would require a wide operation and large experience to tell you what is the best sheep for "light lands." Where forage is light, a less number of any stock should be kept, although it maybe that some breeds will thrive better than others on the same feed. A cross of the best native with the merinos, produces an animal which does well on the common country pastures, and is sufficiently hardy to endure our winter.—This cross is prolific, and with careful attention will produce a fine grade of wool, and fleeces running from three to six pounds to the clip. The sheep recently introduced into Vermont are certainly fine specimens, and we have no doubt, judging from those we have seen, and from the statements of those breeding them, are a superior breed. If we have understood the representations made correctly, they do not require any unusual pasturage or winter care.

4. Plow as deep as you please at once if you have plenty of manure: if not, go down gradually, an inch each year, until you get down sixteen inches.

5. Make all the manure you can, *on the farm*, by every consistent expedient; then if you have outlands, such as old pasture, or old fields, which you are particularly desirous to improve, and where the expense of cartage would be heavy, purchase *specific* manures, unless you can purchase near you good barn or stable manures at \$2.00 to \$4.00 a cord. Peruvian guano or poudrette is probably the best manure you can purchase. Superphosphate of lime has been used with good results, especially on turnip crops.

6. On the land you describe use the Double Plow. It works like a charm.

WHAT SWEET APPLES ARE BEST FOR FARMERS?

An article in the *Country Gentleman*, entitled "Apples for Milch Cows," reminds us of a subject to which we have paid some attention, but as yet not arrived at any definite conclusions. It is this: What varieties of sweet apples are the best for farmers, who have plenty of land for orcharding, to cultivate for the uses of their stock? We want those trees that are naturally hardy, quick growers, and profuse bearers, and the fruit of which shall be the sweetest that can be found; and we want a succession of the apples from September to May.

A farmer who has a suite of trees answering the above requirements, has a source of rich feed for his cattle, sheep and hogs.

We are aware that objections are often made to feeding apples to milch cows. It is said that they will cause cows to dry in their milk. By overfeeding them this will be the result. And so will overfeeding with anything else.

The writer above alluded to very truly observes, that "an unfavorable opinion of apples as food for cows has sometimes arisen from the furious over-

feeding of half starved animals which have accidentally broken into orchards, and brought on disease, fever, and consequent drying of the milk by immoderate gorging—a reason for renouncing such food, would apply to the exclusion of oats from horses, and cold water from men, because they are sometimes injured by an excess of them.”

We wish farmers, and apple-growers, and pomological societies, would turn their attention to this matter, and begin to investigate, and let us hear the results of their researches.

An acre of land will afford room for forty large apple trees. When fully grown, and in full bearing, they ought to yield from two hundred to four hundred bushels of apples,—say two hundred on an average of years. Could an acre of your farm be appropriated to a better and more profitable use?—*Maine Farmer.*

HOW TO DRY PEACHES.

The peach is a palatable and wholesome fruit, the crops will be abundant this year, and large quantities ought to be preserved for winter use, and for use next spring in March, April and May, a period when apples will be scarce, and before the new fruits come in. At the South they are dried as apples usually are, by being spread on boards and placed in the open air. This practice, however, is attended with many inconveniences; they require a great deal of care to protect them from the rain and dews, and are fed upon by flies, bees, wasps and hornets, beside all the domestic animals that can possibly get at them. The sun is not powerful enough to destroy the egg from which the maggot springs, so that when dried and prepared for market, they have in themselves the element of their destruction, and sometimes become worthless and disgusting.

The Shakers, who usually manage their affairs not only with prudence and economy, but with remarkable neatness, have drying houses constructed of stone and heated by a furnace. These are supplied with shallow drawers with bottoms of wire or other gauze, together with movable bars or fine lattice work on racks, where the fruit is spread out thin. All insects are thus kept out and the fruit is continually drying, no matter what the state of the atmosphere may be.

Once or twice during the process of drying, the heat should be raised to such a degree as shall destroy the vitality of the egg which is deposited in the flesh of the peach, and which we as yet have no possible means of preventing.

We do not yet, in this country, use as much ripe fruit, as an article of food, as would be conducive to economy or health. The Yankee temperament is sufficiently ardent without the stimulant which a constant meat diet affords; to those accustomed to a large amount of out-door exercise, no harm, perhaps, may arise from such a diet, but to the sedentary, it is supposed to be the source of many diseases.

But how shall we dry the peaches? Some one, in another paper, has asked the same question, and has been kind enough to answer it himself, so we clap down here what he has said for the benefit of all who desire a good supply of this delicious fruit:

“Do your readers know how to dry peaches?—Take those of the best quality, just as they are ripe enough to eat, halve them, remove the stones, and sprinkle over them, in the hollow from which the pit was taken, a little nice sugar; dry them in a brick oven after the bread, &c., is withdrawn.

“They are far better than if dried in the sun, retaining their aroma and flavor, and besides are totally free from insects. Prepared in this way, from peaches fully ripe, they need no cooking, but are simply soaked out in cold water. All the sugar they require (ranging of course with the variety) is added while drying. Peaches thus dried and prepared, are only inferior to the fresh fruit, of which they retain the flavor in a remarkable degree. If you prefer, take them not quite so ripe, and peel the fruit, but the flavor is not so good as when fully ripe, and is dissipated more in the process of drying.”

¶ We copy from the April number of Hovey's Magazine, the following sensible conversation on the Cultivation of the Pear:

THE CULTIVATION OF THE PEAR.

In a series of Conversational Meetings by the Members of the Massachusetts Horticultural Society.

Saturday, Feb. 5.—Mr. E. M. Richards being absent, Capt. Lovett was called to the chair.

Mr. Cabor stated, that, as the last meeting discussed the propriety of heading in pear trees when transplanted, we might hear the opinions of gentlemen present in continuation of the same subject.

Mr. Strong wished to ask Mr. Hovey if he did not advise pruning in trees as a general thing; he so understood him, and would therefore class him as in favor of heading in.

Mr. Hovey wished to explain. He did say that he advised pruning in as a general rule, because, as a general rule, trees were badly transplanted, the roots destroyed, or more or less injured. Take, say four-fifths of the trees annually sold, and they would come under this rule, and thousands of worthless trees were annually sold at auction, not worth carrying home,—thousands again were imported, and more or less injured on the voyage.—The number of really fine, healthy, well-rooted trees annually transplanted was, therefore, only a small proportion to the whole. Consequently, four-fifths of them needed doctoring, nursing, extra care and pains to make them grow, or rather live,—for a great many of them never would grow. Such being the case, he did advise pruning in, as a general thing. But when, as he had before stated, the trees were what they should be, he would not prune, on any consideration, the first year.

Mr. Strong said he should class Mr. Hovey, then, in favor of pruning in trees, especially imported ones, or those from the forest. He understood the views of Mr. Walker to be different, and he believed them untenable. Mr. Strong dis-

ceased the subject further, and in reference to the action of sap, the functions of the leaves, and collateral matters, which were replied to by Mr. C. M. Hovey. Mr. Strong instanced an experiment with mercury, made to test the ascending force of the sap.

Dr. WIGHT stated that he had satisfactorily tested the value of quicksilver and sulphur in destroying insects. Three years ago, he bored a hole in an apple tree, pouring in quicksilver, and plugged up the hole tight. One year after, he opened the hole, and found the quicksilver in the same state and the same quantity as when put in; it had not undergone the least change whatever. In another tree he bored a similar hole, and inserted roll brimstone. A year afterwards, it was opened with the same result as the other experiment; not the least change had taken place; the sulphur remained as when put in.

Mr. C. M. HOVEY thought this a perfectly convincing proof of the utter falsity of such experiments. Dr. Wight was a careful observer, and accurate in all his experiments; and he trusted this would forever set at rest, at least with all reasonable men, the nonsensical idea that the quicksilver or sulphur would be decomposed and absorbed by the sap, and carried throughout the tree, poisoning the insects which feed upon the leaves. It was an *annual* paragraph for the newspapers, and underwent *annual* trials by persons who believed all they read in them, especially upon agricultural or horticultural topics, and who always reported successful results. If these discussions elicited such facts as these, their importance could not be questioned.

Mr. JOS. RICHARDSON thought there was not a great difference of opinion as regards heading in trees. He believed if trees were not injured by removal, it was best not to cut them in,—if injured, then it was best to prune. It was remarked by Mr. Walker, at the last meeting, that he did not approve of scoring trees. He had had some experience on this point, himself; and so far as he had tried it, it had not been beneficial; on unhealthy trees he had no success. His course was, when a tree was stunted, to encourage the growth of suckers; the top of the old tree he did not remove; but as soon as the suckers were well grown, say in the second year, then it was cut off, and a tree vigorous and healthy was the result. This he had found was far better than to attempt to renovate by scoring the bark.

He was pleased to hear the remarks from Mr. Stickney. He could relate his experience, dearly bought. Some ten years ago, he bought seventy-two dollars' worth of trees at auction. He set them out with the greatest care; nursed them up, but they would not grow and appeared stunted; some he scored, and others he headed in the tops, and took up suckers; still they grew worse and worse, and dwindled away, until he had dug up more than half of them. Those remaining were yet only indifferent trees. He had made up his mind that if he had buried his seventy-two dollars in the soil, he would have been much better off now.

Mr. BRECK wished to add his experience in regard to poor trees. A few years ago he was passing an auction room, where a lot of Seckel pear trees were offered; wishing to get some of this variety, then rather scarce, he bought fifty dollars'

worth; they looked very well in the bundle. Set them out carefully, and they scarcely made any wood; in fact, they looked so badly side of other trees the next year, that he pulled up three-quarters of them; the others remained; a few started from their bottoms and made a tolerable growth; others he continued to cut down till scarcely an original tree remained fit to sell. If he had buried his money he would have been much better off.

Mr. CABOT had but little to add to what he had already advanced. He could not wholly agree with Mr. Hovey. He understood him to say that he would not head in good trees, but in certain cases he would prune, particularly imported trees. He had received many imported trees so dry that he had to throw them into a pond of water to recover them. Yet they had grown well.

The leaves of trees act as so many forcing pumps—as lungs, throwing off water, &c. It is expedient to cut in trees, as you cannot get all the roots—and the roots will not take up as fast as the respiration of the leaves. Mr. Hovey says that when the roots are much destroyed he would head in; when not mutilated he would not cut in at all.

Adjourned one fortnight.

For the New England Farmer.

BENEFIT OF PEAT ASHES AS A MANURE.

Do farmers who possess peat or mud swamps realize the great value of the turf, peat or roots of their swamps when drained and made dry, by burning to ashes and spreading on their planting upland? It was remarked of a neighbor of mine, who moved into town last spring, he had the most luxuriant growing garden of any one in town. The question was asked how he managed to have the vegetation in his garden so green and flourishing, while most of the gardens were suffering by the drought? The reply was, that *he made his own manure*. But he made it *this spring*. It was asked *how*? In reply it was stated that he collected together the turf, peat, &c., of a peat swamp which, a few years ago, was cleared and drained, and carted it upon his upland near his garden—piled it into a heap and burnt it; and the ashes was the *manure* used; and the beneficial result is manifest to all. Will other farmers who have peat swamps, go and do likewise?

I have on the farm that I possess about 50 acres of land; over one-third is peat or mud which I have managed to drain the lower edge, and can drain the whole by cutting level ditches through it, so as to have the surface full three feet above the water in wet seasons. On the lower part which I have brought to, I have stout grass, and peat where the water stood in former days all the year round, except in dry seasons, where grew alders, love bushes, dog wood, and possessed by frogs, specked and horn turtles, water makes, &c.; and part hog lilies, and some white lilies grew. Some patches of water stood so deep that fish, eels, &c., were predominant. This year I have corn, potatoes, beans, and cabbages, which bid fair to come to good maturity. It looks so *promising* that I feel half inclined to give up my upland for pasture and only plant the lowland, as hardly one year in five but what the upland crops suffer for want of rain.

I intend to clear up, the August coming, about

two acres of swamp—get off the wood, burn the brush,—get a root puller and haul over by a yoke of oxen the branches which will pull up,—collect them together if the weather is dry, put fire to them and reduce them to ashes, for the benefit of coming crops, and also carry some upon the uplands. I take the month of August to clear up the swamp, as it is over to maple, swamp whortleberry, alders, dog wood, &c. &c., and it is said that wood, cut in August, or September, is worth 30 per cent. more than that cut in the Spring, for fuel or for timber; and by August I shall have my haying out of the way.

A part of the low land planted as above stated, I had hauled on by the wheelbarrow coarse gravel to the depth of 24 inches, so that by plowing, the mud or peat and gravel was completely mixed.—The largest half was not graveled at all but purely mud or peat—so if I live I expect to see which does the best. I have thrown the above items together, thinking that some farmer might have his ideas a little stimulated to look into the subject matter and might write to give me and others more information on the points mentioned above.

Yours, &c.,
Mansfield, 1853.

ISAAC STEVENS.

HITCHING POSTS.

EF A short time since a pair of horses were hitched to a locust tree in one of our streets, and while standing there devoured all the bark of the tree within their reach, completely skinning it for a considerable distance above and below their heads. They died within a few hours afterwards, being killed by the bark they had eaten. Thus a double misfortune happened—the destruction of a valuable tree, and the loss of a still more valuable team.—*Rockford Forum.*

REMARKS.—That the bark of the locust is poison to man or beast is new to us; that horses' teeth are poisonous to the bark of trees, we have more than once had positive evidence. People often set fine trees about their buildings or gates, and leave them unprotected by stakes or boxes. By-and-by neighbor Cleverman rides up with his bay colt, full of fire and mettle, in order to pass the compliments of the evening, or perhaps, purchase the present year's crop of onions. He looks for a post to which he may tie his champing steed, but *there is none!* nothing presents itself but a beautiful rock maple, which, surprising as it may seem, has been growing by the side of the gate for four years, and has just formed a head of perfect grace and symmetry. So Bucephalus is hitched to the maple, while his owner chaffers with farmer Thoughtless about the onions. The two friends close the bargain, and then sit long in pleasant confab about the prospect of the crops, the cattle market, and the construction of the new road to B. But as there must be an end to all things, so there was to this interesting conversation; the moon had gone down, and the shadows of night covered the earth when Cleverman unhitched his impatient steed, and went clattering over the bridge.

From his chamber window, in the gray dawn of the next morning, farmer Thoughtless saw the skinned and tattered rock maple, *poisoned* by neighbor Cleverman's horse.

MORAL.—If a man sets hedges and gates and makes fine fences, he must expect to have them trampled down or torn up by his neighbor's horses, unless he accommodates them with good substantial posts, with holes, rings or hooks, to tie them to.

THE OLD GREEN LANE.

BY ELIZA COOK.

'Twas the very merry summer time
That garlands, hills and dells,
And the south wind rung a fairy chime
Upon the fox-glove bells;
The cuckoo staid on the lady-birch
To bid her last good-bye—
The lark sprung over the village church,
And whistled to the sky,
And we had come from the harvest sheaves,
A bright and tawney train,
And tracked our path with poppy leaves
Along the old green lane.

'Twas a pleasant way on a summer day,
And we were a happy set,
And we idly bent where the streamlet went
To get our fingers wet;
With the dog-rose here, and the orchis there,
And the woodbine twining through;
With the broad trees meeting everywhere,
And the grass still wet with dew.
Ah! we all forgot in that blissful spot
The names of care and pain,
As we lay on the bank by the shepherd's cot,
To rest in the old green lane.

Oh! days gone by! I can but sigh
As I think of that rich hour
When my heart in its glee had seemed to be
Another woodside flower;
For though the trees be still as fair,
And the wild bloom still as gay—
Though the south winds send a sweet fan air,
And Heaven as bright a day;
Yet the merry set are far and wide,
And we never shall meet again—
We shall never ramble side by side
Along that old green lane.

For the New England Farmer.

VALUE OF COW MANURE.

MR. EDITOR:—Can you or any of your numerous readers inform a subscriber what is considered to be the value of manure, solid and liquid, dropped by a cow, during the time they are usually stable? Also what proportion of the value is usually reckoned as lost when the manure is thrown into the barn-yard and exposed to the weather? A.

Tarrytown, N. Y., July 24, 1853.

REMARKS.—The above inquiry is important, being one of a large class which ought to be reduced to well-defined facts. We hope some of our friends, having experience on the subject, will "let their light shine." Perhaps Mr. Brooks, of Princeton will enlighten us. We know of no person who has experimented so systematically on this subject as he has.

For the New England Farmer.

EARTHING UP CELERY.

MR. EDITOR:—In your "Calendar for August," you say; "The earthing up about the (celery) plants must be carefully attended to this month." I cannot agree with you, because experience, one of the best teachers, has taught me, that celery ought not to be earthed up at all, until within a short time, say three or four weeks before you want to dig it. Last season, (as I have before said in a communication that appeared in the *Farmer* last winter) I tried both ways, earthing up at different times through the season, commencing as soon as the plants were large enough; and also the plan of not earthing up until a short time before I wanted to dig it. The result was, as I expected, the first, was more or less rusty, some of it considerably so, while the latter, was blanched twenty-two inches high, white as snow, and perfectly free from rust; it was good enough to take the first prize of five dollars at the Massachusetts Horticultural Society's Rooms, last Fall, notwithstanding there was quite a number of competitors. I only ask those who are raising celery this year, and you in particular, Mr Editor, to try both ways, and I feel confident, that you all will agree with me, that celery should not be earthed up until within the last three or four weeks; I really don't like to disagree with so good a man as the Editor of the *Farmer*, but I could not help, after reading the "Calendar," giving my experience with this wholesome vegetable. J. V. C. H.

Newton Centre, Aug. 2nd.

REMARKS.—We have never practised earthing up celery, as recommended above, but will make the experiment which our correspondent suggests with great cheerfulness. He has had ample experience, and undoubtedly understands the best modes of cultivation, although he does not fully agree with some other excellent gardeners. Cultivators of this wholesome plant, will do well to try both modes of "earthing up."

ROUGH PAINT FOR FARMERS.

A subscriber, who subscribes himself by the very expressive name of "Economiser," requests us to publish, for the benefit of himself and others, a *durable* as well as cheap paint, to preserve the "heavier and more exposed implements, such as carts, as well as rough gates and such like fixtures."

We have often published recipes of the kind, and it is possible that we have given the following more than once to our readers. We obtained it from the archives of useful knowledge, and it is an old but useful recipe, and our friend will find it to be durable, if well prepared and well applied.

Take twelve ounces of rosin, and eight ounces of roll brimstone, each coarsely powdered, and three gallons of train oil. Heat them slowly, gradually adding four ounces of beeswax, cut in small bits. Frequently stir the liquor, which, as soon as the solid ingredients are dissolved, will be fit for use.

What remains unused will become solid on cooling, but may be remelted on subsequent occasions, if wanted.

When it is melted fit for use, add some Spanish brown, or yellow ochre, or any other coloring substance of the kind that you wish to have, first ground fine in some of the oil, then lay it on with a brush while it is hot, and thin as you can have it.

Some days after the first coat is dry, put on a second. It is said that it will preserve planks for ages, and keep the weather from driving through brick work. Common white paint may be used on the top of it, if required, for the sake of appearances.

Two coats should always be given, and in case of using it on machinery, the several parts should be painted with it, before putting them together, and a third coat put on to cover joints, and after being put together, especially if exposure to the action of moisture and weather—such as gutters, carts, tops of posts, and timber, on, or near the ground. The wood should be perfectly dry when the composition is applied.—*Maine Farmer.*

For the New England Farmer.

NOTES BY THE WAY.

August 6th, 1853.

MR. BROWN:—To aid you in portraying manners living as they rise, I will give you a brief sketch of an excursion yesterday to view the growing crops on some of the highly cultivated grounds in the vicinity of Salem. I visited the farms of Messrs. KENDALL OSBORN, RICHARD S. ROGERS, NATHANIEL FELTON, and AARON C. PROCTOR of Danvers;—and R. P. WATKES and LYMAN MASON of Beverly. All of these gentlemen are known as substantial and successful cultivators. My astonishment was most awakened by the extraordinary crops on the grounds of Mr. MASON—particularly cabbages, squashes and onions. By some magic or other, his grounds turn out products exceeding anything before witnessed. I presume this magic arises from the materials collected on the beach near by—unlimited quantities of which come in for his use. Notwithstanding many apologies made for the appearance of his grounds, by reason of a want of sufficient help to look after the weeds at the proper time, the crops are luxuriant—the onions, many of them already two inches in diameter, and so thick that a dozen or more could be counted in the space of one foot—all as vigorous and healthy as possible. The cabbages bid fair to cover the ground completely—scarcely a space occurs through the entire field, in which there will not be a perfect head. Mr. OSBORN's field of onions is more extensive than Mr. MASON's, and if I do not mistake, will yield 2000 bushels on his four acres. Mr. PROCTOR has a field nearly as large. I had no time to examine the crops on the farms of Mr. FELTON and Mr. WATKES. Their barns and stock, are in the best condition. On the farm of Mr. ROGERS' culture of the first order is to be seen. His field of carrots promises well. His working oxen, three pair, are equal to any others to be found. They cost as I was informed about \$200 a pair. I was shown a grass field on this farm, that has yielded 4 tons of hay to the acre, the present season, caused chiefly by the dressing of liquid manure applied—the machine for distributing which, I examined. It consists of a large cask mounted on wheels, into which the liquid is pumped from a cistern, from which it flows into a distributor that scatters it like drops

of rain, as the wheels pass along. Here is a saving of fertilising material, not often witnessed. Ten acres or more, were thus enriched on this farm. All the arrangements about the extensive farm of Mr. ROGERS, are in the most complete order. On the farm of Mr. WATERS, I saw a mowing machine, that had been operated a little; laid aside for want of skill in those who worked it. I have good reason to believe, that machines for mowing will ere long be in as common use, as machines for raking now are. The corn-fields, as I passed along, appeared in fine condition. There is no crop, in my judgment as a whole, superior to Indian corn. The manner in which it leaves the land for other crops, is one of its best features. I felt in duty bound, as I passed, to pay my respects to the venerable *pear tree* on the Gov. Endicott estate, without question more than 200 years old. I found it growing vigorously, some of the branches having extended more than a foot the present season—and all of them being fully laden with fruit; it is indeed a curiosity. I saw also the original stump of the *Eppes' sweeting*, with a tree growing out of it—but like most other apple trees, it bears no fruit this season. I have rarely passed through a section of country, with scenery more variegated and beautiful—particularly the views from the summits visited in Danvers and Beverly.

The beauty of Mr. WATER's position is only surpassed by the gentlemanly hospitality of its proprietor.

N. B. Mr. MASON, showed me his *only cow*, an animal of native breed, now about ten years old, of large size and prime condition—whose calf, killed at the age of 3 weeks and 2 days, weighed 168 pounds—from which cow 33 lbs of milk had been taken at a single milking—and 17½ lbs of butter made in one week. Such facts need no comment. There may be breeds of cows that do better than this, but I have yet to see them.

For the New England Farmer.

SALERATUS.

MR. BROWN:—I noticed in your August No. of *New England Farmer*, an article on the use of saleratus. I had seen several articles on the same subject elsewhere. They seem to be written by men who are not aware that it is never used by good housekeepers, except in connexion with some acid, which *destroys* its alkaline properties.

In the country, sour milk is much used, and Cream of Tartar has of late come into use extensively. The *evil* is in using too much, i. e. more than sufficient to neutralize the acid. When this is the case, the bread will be discolored, and smell and taste of saleratus.

Bread raised with yeast is, no doubt, healthiest, best, and most economical for common use. But as this is a process requiring usually four or five hours, how shall we "hurry up those cakes," of which our *men folks* are so fond, without saleratus? Milk may be used with it, but can hardly "take its place there," as you suggest.

MEX.

REMARKS.—Well, Mistress "Meg," we thank you for your pleasant article above, and are confident you are one of the wives that the scripture

speaks of as "rising in the morning and looking to the ways of her household." But we shall be obliged to fall back on our "reserved rights" in this case, and get *our wife*, who uses little or no saleratus, to tell us how she manages! We will "stake her bread against the world," and invite you to call at River Cottage and test it yourself.

For the New England Farmer.

OLD FIELDS.

An unpromising subject, you will say, Mr. Editor. I grant it, but still argue that it should be discussed. Are you aware what an amount of land in Massachusetts comes under this denomination? Suffice to say it is very great. In the old county of Hampshire, are tens of thousands of acres of this character. Land originally productive, though light and sandy, which by continual draining, or perhaps more properly, skimming, has been so far reduced as to be regarded as almost worthless.

These "old fields" are, for the most part, supposed incapable of producing anything but rye, and that in very small quantities.

The common practice is to sow rye once in three years; fallow plowing in June, and again plowing and sowing early in September. No grass seed is sown, nor is it expected the ground will produce anything but weeds during the two intervening years—but seek repose in a short Van Winkle nap.

The product varies from five to nine bushels.

We will allow seven to be the average, which is liberal. The expense of plowing twice, harrowing and sowing, is at least three dollars. Such land is estimated at from ten to twenty-five dollars per acre. Call the interest sixty cents for three years \$1.80. Taxes and fencing, say fifty cents per acre, \$1.50. Making an aggregate cost of \$6.30 for the production of seven bushels of rye. One bushel of which must be deducted for seed, leaving six bushels, worth, on an average, 5s per bushel—\$5, as a return for a cash outlay of six dollars and thirty cents. I allow that the straw will pay for harvesting and threshing, still the cultivator does not get pay for his labor, and would be better off without land.

This I call an impoverishing process. It impoverishes both the soil and the tiller. That the cultivator is made poorer, is shown by figures which can't lie. Experience and common sense prove that land will depreciate and be rendered less productive by this process. Let the farmer skin his horse and turn him out to pasture. He may save the hide, but a long time will elapse before he will obtain another, or any service from his horse. A process somewhat analogous is pursued by those who crop old fields with rye and nothing but that.

Agricultural products have become too valuable in New England to suffer land to remain thus unproductive. The cause of agricultural science demands that labor, expended upon the cultivation of the soil, should be remunerative.

We hear much said of the old fields in the Southern States,—tracts of land, which, by continuous cropping and bad tillage, have been rendered worthless, and turned out as part of the public goose-pasture.

We New Englanders regard this as bad hus-

bandry and bad economy. And I regard as bad economy every system of cropping which reduces the strength of the soil,—which diminishes the real value of the land. I say *system*. The removal of a specific crop may exhaust the land more than is equivalent to the manure applied for that crop, and the land not be injured in the long run. But every circle or rotation of crops should leave the land in as good heart, at least, as it finds it. Otherwise there is bad husbandry and must be ultimate failure.

Good teamsters understand that it costs less to keep a horse in good condition than otherwise.—They know also that a horse thus kept will perform more labor and endure more hardships, and that, too, far more to the satisfaction of his owner, than one which seems vacillating near the starvation point, and is permitted to eat only to live and not die. They know, too, that when a horse begins to "run down hill," 'tis hard keeping him back.

So of the soil. Newly cleared land, which will produce thirty bushels of rye to the acre, requires no more labor for tillage than the same land will require when so reduced as to produce no more than seven bushels. If there is more profit in raising the former crop than the latter, why will not farmers take the necessary step to secure it?

As in the case of the horse, the soil, when in a good condition, is easily kept so. These need only to supply from year to year the mineral ingredient of which the crop has robbed the soil. All the other ingredients necessary to form the pabulum of plants, the soil, with the combined agency of water, air and caloric, will elaborate for itself.

Here we see, Mr. Editor, the necessity of a little "book knowledge." The farmer needs to know *what* his soil contains,—in what it is deficient, of what his crop of rye has robbed it. This can be learned only by analysis. But when learned, the remedy is at hand, and can easily be applied.—And when agriculture is conducted with the same regard to economy and thrift as other departments of industry, this will be understood and practised. But to return from this digression to the old fields. They were compelled to submit to a constant drain, with no means of redress. Soon they were so far reduced as not to be capable of producing corn, and rye was thought the only crop that would pay. Consequently these fields have long been in the condition of the "poor old horse."

It is not that the soil is entirely worn out, that its productive properties have all been exhausted. There is still vegetable mould; and the pabulum of other plants, than rye, still exist in sufficient quantities. There needs but a husbanding of the resources which abound and a change of crops. It is often easier to locate disease and give it a name, than to prescribe a remedy.

I do not lay claim to superior knowledge in this matter, nor have I had much experience. I will venture, however, a few suggestions, which, if in themselves worthless, may elicit from others information upon this important topic.

I. These lands should be properly plowed. This has seldom been done. The number of farmers who plow well, is small indeed. The number is still smaller of those who plow old fields properly. The belief is common, that these worn-out lands

have but little soil,—that that lies near the surface and that, in "plowing," care must be used not to disturb the subsoil.

The truth lies much deeper. One cause of the deterioration of these lands is improper plowing. I believe in *making* soil. Let the subsoil, or "yellow dirt,"—be exposed to the sun and rain,—let it absorb the carbon, which is afloat in the atmosphere, and the other fertilizing elements with which it is charged, and in one year it changes its color and assumes the appearance and actually possesses the properties of vegetable mould.—Hence the importance of deep plowing. And these old fields should be disturbed with a "deep tiller," to the depth of six inches, and then seven, and so on to at last ten. Then let the subsoil plow follow.

Or, if manure is to be applied, in the first instance, in sufficient quantity to secure a crop of corn, let the subsoil be disturbed to the depth of at least twelve inches from the surface. I have said that these exhausted lands might be reclaimed by supplying the mineral substances of which they have been deprived; that the vegetable would be procured or elaborated by a natural process. Land, from which a heavy growth of pine timber has been removed, will not yield another crop of pines. But oaks, chestnuts, or some other species will spring up and grow vigorously. Let the mineral ingredients of the pine be supplied, in sufficient quantities, and I suppose a second crop of pines would grow and equal the first. So with these old fields. If you would continue the growing of rye, you must apply lime, potash and phosphorus, and other minerals which enter into the composition of rye.

2. These fields should be plowed *frequently*,—plowed, not for the purpose of cropping, but for fertilizing. If light, heat, moisture and atmospheric agencies are relied upon to work the change, the soil, and the whole soil must be kept in such a condition that these agencies may act freely.

3d. The products of the soil must be used to enrich it. One of the most common errors of farmers is the cropping of lands to exhaustion. The wool-grower, who in December shears his sheep, may save his wool and get a quick return. But he injures and probably destroys his flock, and in the end sustains a great loss. Not less unwise is the husbandman who carefully removes from the soil everything it produces.

When in good heart, lands will make liberal returns for all they receive. But when exhausted, when bankrupt,—when they have been "run" till their vaults are empty, they cannot be expected to make dividends. They must keep what they have got and get what they can, or become hopelessly insolvent.

If the merchant were to abstract every dollar he makes in trade, and invest it in real estate, his business would suffer. If wise, he keeps it as a working capital. Let the farmer imitate his example and he will reap a like reward. When he has succeeded in growing a light crop of clover or buckwheat or rye upon this long abused and exhausted soil instead of removing it to his barn, let him deposit it, furrow deep just where it grew to be reserved as a working capital.

Let every thing which grows from the soil be returned to it, and in a short time, "with no outlay

or expenditures, save the cost of plowing, the use of the land, and a small amount, for some mineral manures, fertility may be restored.

4. Tillage lands should always be seeded with grass, when suffered to rest.

The man, who, after driving a horse hard all day, should take his teeth out and then tie him to a rack, filled with hay, would be denominated both inhuman and unwise. Equally unwise is the cultivator, who suffers his land to rest, without the means of deriving nourishment from the great storehouse of fertilizing matters,—the atmosphere.

Where muck may be easily obtained, the same result may be secured, by a shorter process. After plowing, spread a liberal dressing of muck upon the surface and pulverize thoroughly with the harrow. Then sow clover seed, rolled in dry ashes,—ten bushels of ashes to the acre. Plow in the first crop of clover,—sow rye and the last of May following, turn in the rye, and plant corn.

Should these crude suggestions lead to examination and further elucidation of this subject, my object will have been gained.

R. B. H.

STUBBLE LANDS—THE ROLLER.

Lands from which exuberant crops of hay have been taken, ordinarily produce a heavy aftermath, or as it is commonly called "*Fall feed*." This when the sod is carefully inverted and suffered to decompose, furnishes a most excellent and salutary manure. According to some writers who have experimented accurately, an acre of well set grass land contains (after the grass has been cut for hay,) from thirty to forty tons of soluble matter "*fit for the food of plants*." This, by being turned under after haying, is in a condition to operate a highly salutary influence upon the soil and its subsequent crops. Science has already demonstrated that no manure which it is within the capacity of man to apply to the soil, is so efficient as that produced by the decomposition of the plants it is required to support.

In France, and other countries where the grape is one of the chief staples, the leaves and tendrils of the vine are used, and wheat of the most surprising luxuriance is produced by a compost formed of the chaff and straw of that production. When sprinkled on grass, grains of wheat have vegetated and produced sound seed, when simply covered with this "*manure*," and "*watered with pure water*." In the case of turning in stubble, the laws of chemistry act with the greatest facility, and produce, without any extraneous assistance, the accomplishment of all the important results affected by the best manure. A field that has become so far exhausted as to require manuring, harrowed and sowed with grass seed, without the impoverishing effect of an intervening crop of roots or grains, would be at once restored and made capable of the production of good and remunerating harvests for a period of several years.

This practice has already been extensively adopted among us, and with satisfactory results. It is

true, that in consequence of the practice of "*long cropping*," some fields are so far exhausted as to be able to produce enough to repay the cost of turning down. On this subject a late writer remarks:—

"There are some hay fields, however, the vegetable matter contained in which, would be found scarcely sufficient to remunerate one for the cost of turning it in. On light, thin, and exhausted, or "*worn out*" lands, this is often the case. Yet even such lands, (however weakening may have been the system of cropping previously pursued,) are by no means undeserving of regard. It is bad policy to neglect land simply because it has been neglected. If I have a poor field, which, instead of producing enough to pay the expense of carrying it on, annually runs me in debt, my own interest demands that I immediately set about its improvement, and that I endeavor to effect this by the adoption of some method that, without involving too heavy an outlay, will ultimately secure the desired end. Rather than permit the soil to continue longer in this expensive, exhausted, and emaculate condition, I should disburse liberally, for like bad habits in a man, the evil, instead of diminishing, will increase the longer it is indulged. By turning in, therefore, whatever they have vigor to produce, I necessarily augment the productiveness of such soils; and if the texture be of a light, calcareous description, the roller should be applied. The application of this instrument, indeed, is indispensable, in order to consolidate, and give firmness to the constituent particles which otherwise would remain too loose and porous to permit the ready decomposition of the substances turned in. This operation also facilitates, in a very important degree, the salutary influences resulting to the soil from the ameliorating agencies of frosts and rains;—a body, the atoms of which exist in a state of extreme compression, being much more efficiently operated on by these principles, than one whose constituent corpuscles exist in a state of separation, or farther apart."

"All kinds of lands," says VON THAER, in his principles of Agriculture, have a tendency to agglomerate, or become too close, either in consequence of the attraction of cohesion of their particles, or of the pressure exercised on them by the atmosphere. The more argillaceous (clayey,) a soil is, the greater is the consistence and agglomeration. But most of the plants I cultivate, are unable to penetrate so hard a soil, or to derive from it the nourishment requisite for their support. It is, therefore, necessary that the soil should be loosened by some mechanical process; and this should be done as perfectly as possible, in order that rich vegetation may be produced, and all the nutritive matters contained in the ground be placed within the reach of the roots of the plants. In order to effect this, it is necessary that the layer of vegetable earth should be pulverized till not a clod or lump be left. The fibrous roots of plants do not penetrate these clods; all they can do is to wind themselves around them, and consequently, clods of earth scarcely yield more nutriment than stones."

In selecting hay seed, great care is requisite to prevent deception. Much of the clover seed now retailed, is damaged by fermentation: Seed "got out" in a proper condition, if "packed" or stored in large masses, always undergoes a process which, if not actually fatal to the germinating principle, at least greatly diminishes its vigor. A healthy and vigorous plant can only spring from a healthy and vigorous seed.

For the New England Farmer.

MONTHLY FARMER FOR AUGUST.

For our bird's-eye view of the contents of this number, we propose to attempt an arrangement by subjects. First then, in alphabetical as well as numerical order, belongs what is said of

AUGUST.

Editorial observations on the characteristics of the month, with regrets that the merry-makings with which our ancestors celebrated the close of harvest-time, are not observed by us. Followed by hints for the month on the turnip crop, reclaiming meadows, grapes, grains, celery, budding, muck, &c.

BUTTER.

"How is it produced?" The writer doubts the ability of any butter-maker in the State to answer the question, and he wants some chemist to do it. Chapal, he says, dodges it. Perhaps he did not know. Chemists don't know every thing. The \$10,000 offered by the State for the "application of science" to the cause and remedy of the potato-rot, is yet in the treasury! while the insidious disease, nothing daunted, is still doing its fatal work, mysteriously alike to the learned Professor and the unlearned Plowboy.

CULTIVATION.

"Swamps—draining." On land drained by the Editor, according to the directions of this article, three tons to the acre of herdsgrass, red-top and clover, were harvested this year, where one ton of meadow grass, skunk cabbage, hardhack and hassock grass grew two years ago! "The Drought" does not injure thoroughly cultivated land. "Hoeing Corn," the more the better; but we are cautioned against "Hilling Plants," because nature don't. But nature does mulch; how far is this an argument for hilling? "Much labor on little land" recommended, and an instance of the "Effects of deep Plowing" in Maine is given.

FOREIGN CORRESPONDENCE.

"Down East," by Mr. Taylor, gives us information on raising oats, and on various other farming matters, in New Brunswick. In addition to the reply of the Editor to Mr. T.'s inquiries in relation to threshing clover seed, I will say that years ago I saw a mill for this purpose, in which the work was done by water-power. I can give no description of it, further than to say, it was a cheap, simple machine, fitted up I think in a saw-mill building, and, like it, served a whole neighborhood. A shaft faced with sheet iron, punched like a grater, two or three feet wide, and perhaps twice as deep, played up and down, nearly in contact with a similar stationary grater-plate. Between these two rough surfaces the seed was rapidly and effectively "threshed," after having

been first separated from the haulm or straw. We have here also a flattering notice of "Agriculture in France;" and "A Residence in China," gives us some queer things about the Celestials; but the question asked some time ago in the *Farmer*, How do the Chinese preserve the fertility of their soil? is not answered. Pity there are so few farmers among the multitude of Americans abroad.

FRUIT.

An inquiry for information on raising and improving our "Indigenous Fruits and Shrubs," has called out a very able reply; in connection with which the article on "Cross Fertilization" should be read. We have also an article on the "Effect of high Culture on Fruit Trees," a notice of a "Rare and Pleasant Book," printed in 1631; Instances and theory of "Girdled Apple Trees" living after the bark was removed for the space of five inches; a picture, description, and recommendation of "The Black Tartarean Cherry;" and in the article, "Apple trees killed by Potash," are suggestions and facts in relation to other washes.

GARDEN.

"History and Culture of the Mignonette;" Report of the "Horticultural Exhibition at Concord, Mass.;" A pleasant article on the "Use of Flowers"—their being placed in church is new to us; with Figures and description of "Pauning Shears."

GRAIN.

"Ergot in Rye"—an account of a paper on this subject, read before the French Academy of Science.

HAY.

The haying season being over, we find but little on this topic, except some remarks on "Hay Crops."

IMPLEMENTS.

A cut and description of a simple apparatus for "Raising Water by Wind;" "Pruning Shears" illustrated and described; "Cross-cut Feed Cutter," about to be made by Mr. Ferry; "The Wheel Hoe" recommended; and some hints on "Good Tools for Boys," from which I must quote one sentence:—"If you wish to discourage your boys, and drive them off to the city, to sea, to California, give them rusty hoes, broken shovels, dull scythes, &c., to work with."

INSECTS.

The various articles on this subject, in the number before us, are worth the subscription price of the *Farmer* for a year to every person who cultivates a single plant or tree, or who has a spark of curiosity for the "little folk" of the animal kingdom. On the "Palmer Worm," or "New Insect," we find communications from Professor Harris, Cambridge; H. M. Stimpson, Saxonville; R. C. Stone, Sherburne; S. G. E., Chester; J. Lake, Topsfield; B. M., York Co., Me., and remarks by the editor. An article by Mrs. Darling, New Haven, Ct., and one copied from the *Maine Farmer*, charging insects with producing the black knot in plum trees, are certainly interesting if not conclusive. The ladies will thank the Editor for an infallible protection against "The Moth." The "Rose Bugs," and other insects injurious to vegetation, the writer thinks may be greatly thinned off by a union of effort for their destruction on the part of those

interested. I have sometimes thought one design of insect depredations is to teach man humility—to show him the weakness of his power, the foolishness of his wisdom, the fallibility of his science. One year, for instance, the grasshopper may be a burden—literally swarming in our fields, and filling every square foot of the soil with their eggs. But in face of your mathematical demonstrations that millions must cover the land next year, there may not be a dozen found on a ten-acre lot. "Is the mole a devourer of vegetables?" The writer says "No; he lives on earth worms." "Entomological Discovery"—to destroy the nit of the Curculio.

MANURES.

Hints on "Composting," by H. F. French; Effects of Potash as a "Special Manure for Grapes;" different kinds of "Manure for laying down Grass Lands;" inquiries about "Lime from Gas Works;" "Barn Cellars, Restorative Gases, and other Speculations," by Silas Brown.

MECHANICS.

Mr. Percival, Veterinary Surgeon of the Royal Artillery, Dublin, points out several pernicious "Practices in Shoeing Horses" that smiths often fall into, and gives many practical hints on the subject. Appended to the article on "Raising Water by Wind," are some suggestive remarks on agricultural mechanics.

PRESERVING TIMBER.

A communication of facts, showing the practical value of the process of "Kyanizing." The timber used last year in rebuilding the Lowell R. R. bridge over Charles river was, I believe, subjected to this process. John Reynolds, agent Vermont Copperas Company, gives a statement of the preservative qualities of Copperas, that may prove of great importance.

ROOTS.

A well written article on the "Culture and value of the Parsnip."

SCIENTIFIC.

This proves a troublesome "heading." Of the ninety distinct articles in this single number of the *Farmer*, there is scarcely one that is not more or less tinged with science. Which, then, shall enjoy the distinction of *scientific*? I have placed those here which do not appropriately belong to any of our other captions. I could think of no better rule. "Importance of the Leaf to the Plant," and "Circulation of Sap," treat of the growth of plants, and must prove interesting to thinking, inquisitive farmers, although the writer of the latter article says, "There are very serious difficulties attending any theory which has undertaken to provide for the circulation of fluids in vegetables." Some account of the newly-established "New York State Agricultural College," and an exhortation to the Massachusetts Board of Agriculture, as "a class of men, hopeful and courageous because they have clear, comprehensive, and well defined views of what can be beneficially done in the way of agricultural education," to abandon their "mere discussions," and proceed at once to give "life and an active practical usefulness to an agricultural College" in Massachusetts. Illustrating in a familiar manner several scientific principles, we find an article with the caption "How the water boiled away from the Potatoes."

SETTING POSTS—FRONT FENCES—ALDKERS.

The inquiries of a correspondent for information on these topics, has occasioned a pretty full discussion—the views and suggestions of five or six writers being given in this number.

STATE INSTITUTIONS.

On this subject we find two short communications.

STOCK.

"Cows and Tar"—a remedy for the garget. The use of collodion recommended "to prevent Cows shedding Milk," and to cure sore teats. "Cows holding up their Milk" cured by putting a weight upon the back. Illustration of the "French Buck Matchless." What a sheep!

THE SEASON.

"Prospects of the Season," in New Hampshire, by A. G. Comings; and in Massachusetts, by the Editor.

WARTS.

Recipes for curing warts. We once dislodged a numerous company from our hand by occasionally putting a very little spirits of turpentine around the roots of the "old seeder," whose great length exposed it to so frequent rubs as to be kept sore, until it was finally extracted. The small fry, following the footsteps of their illustrious predecessor, soon disappeared.

WEEDS.

A valuable editorial on the subject; a description of a new weed in New Hampshire; and a sure method of destroying "Canada thistles" in one season.

Even the foregoing comprehensive summary leaves on hand several articles, that do not seem to belong to either of our divisions, but which have a good claim to especial notice. Among them are, "What Farmers most need;" Statistics of "Agriculture in New Hampshire;" on "Trimming Pine Trees;" "Salicatus" injurious to health; "Monthly Farmer for July;" "Communication of Ideas among Cattle;" "Fable of the Rain Drop," and articles appropriate to the Ladies' and to the Boys' Departments.

Winchester, Aug., 1853.

A READER

For the New England Farmer.

TOMATOES.

MR. EDITOR:—For several years past, I have been in the habit of trimming up my tomato vines pretty closely. After as much fruit is set as will ripen before frost, I go among them with a pair of shears, cutting off the tops and all young shoots, to prevent any more fruit being formed. In this way they grow larger, fairer, and ripen much earlier, as I think. Without this thinning out, the sun's rays can hardly reach them through the rank growth of leaves. I have recommended this plan to some of my neighbors, but as they have seen nothing of the kind "in the books," they cannot venture to cut off "such beautiful branches," though they see my tomatoes ripe one or two weeks earlier than any in the neighborhood. Now, Mr. Editor, if you think I am right, just give this a little corner in the *New England Farmer*, and my neighbors will receive it as "by authority."

MEO.

MORNING.

BY H. D. WHITE.

The morn awakes! Fresh from its sleep,
Earth hails the fount of light,
And through the lone ravines retire
The sombre shades of night.

The flowers refreshed salute the day
With dewy lips and blushes gay,
While choral round'lays from the grove
Announce the reign of light and love.

Above the lake the giant pines
Stand like a phalanx grim,
Arranged around their bannered altars
In mystic worship, dim.

The wave's low voice—the streamlet's chime,
Soft murmur'ing o'er departing time,
In measure mystic, like the hymn
Breathed by adoring seraphine.

Sweet, holy scenes! Can human hearts
Behold thy glories and be sad,
When night, like gloomy doubt, departs,
And earth in Aldem's robes is clad;
When from great nature's breast these flows
Sweet inspiration for the wise,
And naught save beauty, joy and love,
Salute the gaze of mortal eyes?

Eastern Journal.

PRACTICAL BEE KEEPING.

We give below another extract from Mr. Langstroth's work on Bees:

The present condition of practical bee-keeping in this country, is known to be deplorably low.—From the great mass of agriculturists, and others favorably situated for obtaining honey, it receives not the slightest attention. Notwithstanding the large number of patent hives which have been introduced, the ravages of the bee-moth have increased, and success is becoming more and more precarious. Multitudes have abandoned the pursuit in disgust, while many of the most experienced, are fast settling down into the conviction that all the so-called "Improved Hives" are delusions, and that they must return to the simple box or hollow log, and "take up" their bees with sulphur, in the old-fashioned way.

In the present state of public opinion, it requires no little courage to venture upon the introduction of a new hive and system of management; but I feel confident that a *new era* in bee-keeping has arrived, and invite the attention of all interested to the reasons for this belief. A perusal of this Manual, will, I trust, convince them that there is a better way than any with which they have yet been acquainted. They will here find many hitherto mysterious points in the physiology of the honey-bee, clearly explained, and much valuable information never before communicated to the public.

It is now nearly fifteen years since I first turned my attention to the cultivation of bees. The state of my health having compelled me to live more and more in the open air, I have devoted a large portion of my time, of late years, to a careful investigation of their habits, and to a series of minute and thorough experiments in the construction of hives, and the best method of managing them, so as to secure the largest practical results.

Very early in my Apian studies, I procured an imported copy of the work of the celebrated Huber, and constructed a hive on his plan, which furnished me with favorable opportunities of veri-

fying some of his most valuable discoveries; and I soon found that the prejudices existing against him, were entirely unfounded. Believing that his discoveries laid the foundation for a more extended and profitable system of bee-keeping, I began to experiment with hives of various construction.

The result of all these investigations fell far short of my expectations. I became, however, most thoroughly convinced that no hives were fit to be used, unless they furnished *uncommon protection* against *extremes of heat* and more especially of *COLD*. I accordingly discarded all thin hives made of inch stuff, and constructed my hives of *doubled materials*, enclosing a "dead air" space all around.

These hives, although more expensive in the first cost, proved to be much cheaper in the end, than those I had previously used. The bees *wintered* remarkably well in them, and swarmed *early* and with *unusual regularity*. My next step in advance, was, while I secured my surplus honey in the most convenient, beautiful and saleable forms, so to facilitate the entrance of the bees into the honey receptacles, as to secure the largest fruits from their labors.

Although I felt confident that my hive possessed some valuable peculiarities, I still found myself unable to remedy many of the casualties to which bee-keeping is liable. I now perceived that no hive could be made to answer my expectations unless it gave me the complete control of the combs, so that I might remove any, or all of them at pleasure. The use of the Huber hive had convinced me that with proper precautions, the combs might be removed without enraging the bees, and that these insects were capable of being domesticated or tamed, to a most surprising degree. A knowledge of these facts was absolutely necessary to the further progress of my invention, for without it, I should have regarded a hive designed to allow of the removal of the combs, as too dangerous in use, to be of any practical value. At first, I used movable slats or bars placed on rabbets in the front and back of the hive. The bees were induced to build their combs upon these bars, and in carrying them down, to fasten them to the sides of the hive. By severing the attachments to the sides, I was able, at any time, to remove the combs suspended from the bars. There was nothing *new* in the use of movable *bars*; the invention being probably, at least, a hundred years old; and I had myself used such hives on Bevan's plan, very early in the commencement of my experiments. The chief peculiarity in my hives, as now constructed, was the facility with which these bars could be removed without enraging the bees, and their combination with my new mode of obtaining the surplus honey.

With hives of this construction, I commenced experimenting on a larger scale than ever, and soon arrived at results which proved to be of the very first importance. I found myself able, if I wished it, to dispense entirely with natural swarming, and yet to multiply colonies with much greater rapidity and certainty than by the common methods. I could, in a short time, strengthen my feeble colonies, and furnish those which had lost their queen with the means of obtaining another. If I suspected that anything was the matter with a hive, I could ascertain its true condition, by making a thorough examination of every part,

and if the worms had gained a lodgment, I could quickly dispossess them. In short, I could perform all the operations, which will be explained in this treatise, and I now believed that bee-keeping could be made highly profitable, and as much a matter of certainty, as any other branch of rural economy.

I perceived, however, that one thing was yet wanting. The cutting of the combs from their attachments to the sides of the hive, in order to remove them, was attended with much loss of time to myself and to the bees; and in order to facilitate this operation, the construction of my hive was necessarily complicated. This led me to invent a method by which the combs were attached to movable frames, and suspended in the hives, so as to touch neither the top, bottom, nor sides.—By this device, I was able to remove the combs at pleasure, and if desired, I could speedily transfer them, bees and all, without any cutting, to another hive. I have experimented largely with hives of this construction, and find that they answer most admirably, all the ends proposed in their invention.

While experimenting in the summer of 1851, with some observing hives of a peculiar construction, I discovered that bees could be made to work in glass hives, exposed to the full light of day.—The notice, in a Philadelphia newspaper, of this discovery, procured me the pleasure of an acquaintance with Rev. Dr. Berg, pastor of a Dutch Reformed church in that city. From him, I first learned that a Prussian clergyman, of the name of Dzierzon, (pronounced Tseertstone,) had attracted the attention of crowned heads, by his important discoveries in the management of bees. Before he communicated the particulars of these discoveries, I explained to Dr. Berg my system of management, and showed him my hive. He expressed the greatest astonishment at the wonderful similarity in our methods of management, both of us having carried on our investigations without the slightest knowledge of each other's labors.—Our hives he found to differ in some very important respects. In the Dzierzon hive, the combs are not attached to movable frames, but to bars, so that they cannot, without cutting, be removed from the hive. In my hive, which is opened from the top, any comb may be taken out, without at all disturbing the others; whereas, in the Dzierzon hive, which is opened from one of the ends, it is often necessary to cut and remove many combs, in order to get access to a particular one; Thus, if the tenth comb from the end is to be removed, nine combs must be first cut and taken out. All this consumes a large amount of time. The German hive does not furnish the surplus honey in a form which would be found salable in our markets, or which would admit of safe transportation in the comb. Notwithstanding these disadvantages, it has achieved a great triumph in Germany, and given a new impulse to the cultivation of bees.

THE CROPS IN ENGLAND.—The *London Mercantile Gazette* of August 5th, speaking of the wheat crop, says that "it is certainly not promising in appearance; and however much it may be favored by the weather, the yield must inevitably be short. There are reports of blight from several parts of the Kingdom, and fears are entertained of a dis-

ease similar to the potato rot." The potato crop is also spoken of as in a precarious condition not only in the British Islands, but in France, Holland, Belgium and some parts of Germany likewise; and there can be little doubt that a large portion will be lost.

The opinion is expressed, that under this state of affairs, coupled with the unfavorable aspect of matters at the East, breadstuffs can hardly be expected to recede in price, though at the present moment there is some languor in the market. In consequence of the spread of the potato disease corn afloat has advanced in price.

GRAPES.

This delicious fruit is raised, we are glad to see, in great plenty in and around Boston. Almost every yard, large enough to plant a vine in, is improved, and the care that is bestowed upon the vines is well repaid in the abundant yield they present for the cultivator's enjoyment. The medicinal properties of the grape are hardly well enough understood. They assist, by their diluting properties, in removing obstructions of the lungs, liver, kidneys, &c., and in all the protean forms which dyspepsia assumes, they are found highly efficacious. Dyspepsia and liver complaints have scarcely an existence in the vicinity of vineyards in the old country, except among the invalids from other parts, who resort to these localities to partake of this delightful remedy, to be cured of these maladies. It appears to bring about these important results by diluting the blood, and in this manner relieving the obstructions, and causing at the same time a greatly increased circulation in the skin. In fever they may be used always with advantage, the juice being very invigorating and nutritious. In dysentery, likewise, they are said to be very efficacious, and in grape growing countries an unlimited freedom of the vineyard, during this season, it is said, is attended with the best results. But care should be taken that the fruit is perfectly ripe and sound, or it may prove as deleterious as, in a right condition, it is beneficial. The paper from which we quote says, they give vigor and great activity to feeble and delicate constitutions, and no other fruit causes so great a change in the feelings and strength of the aged, as well as those in the youth, as the well ripened grape, when taken in large quantities. They are antiseptic, and arrest a tendency to decomposition or mortification. They cool the blood, allay irritation, and act as a diluent, and thus remove obstructions of the vital system. Indeed, it is the prince of fruits, and divine inspiration places it even higher than it is held by those who ascribe to it all these virtues. Eat the grape for pleasure and health, and you will soon, in most cases, feel that you have an increased share of both.

Col. Baptiste, who has a fine vineyard of black Spanish grapes at East Pascagoula, the vines of which are in bloom for the third time this season, intends to try the experiment of wine making. The New Orleans Delta does not doubt that in a few years the whole southern sea coast will be one extended vineyard, producing the choicest wines that are now imported from Spain and Italy — *Boston Post*.

AX MAKING.

The Ax Manufacturing Company of East Douglas turn out daily from ten to fifteen hundred axes, and from six to ten hundred broad axes, adzes, hatchets, &c., of nearly fifty different patterns. The process of manufacture is especially interesting, from the fact that most of the work is done by machinery. In the first place, the bars of iron of different sizes are placed under ponderous shears, which sever the iron with perfect ease. The patterns are then taken to the rolling mill, and after being heated are passed through rollers, which form the eye of the ax. They are then bent over by the same machine, and the heads set down. The ax then goes through the process of welding, which is done by pump hammers, after which the steel is inserted, which is also done by hammers. The finishing touch is given by hand hammers. About two hundred persons are employed in this establishment, their wages ranging from one to five dollars per day. The proprietors, Messrs. L. B. & A. Hunt, are enterprising and ingenious men, and their axes are unsurpassed by any other manufacturer. The amount of their business is about \$300,000 per annum. East Douglas, we are told, is a thriving, wide-awake place, and is soon to enjoy the facilities of a branch railroad.

For the New England Farmer.

THE POTATO ROT.

MR. EDITOR:—As I was passing a neighbor's farm last evening, I discovered his field of potatoes—vines of luxuriant growth—had a blighted, forbidding aspect, yellowish cast, many of the leaves shrivelled, edged with black. I soon met an intelligent farmer of the neighborhood, and inquired of him the meaning of this appearance. He said the same was the case in his fields, and many others about there, that it had come on within a few days, the cause he did not know,—nor do I. The fact is certain. What is to follow, I cannot say, whether this appearance of the vines has any connection with the tubers that are expected to be grown, time alone must determine. It will be well for all cultivators to take notice of all extraordinary appearances, and to communicate them in an intelligible form. I fear it is not indicative of any good. Yours, &c., P.

Danvers, August 1st, 1853.

P. S. Vegetation generally was never more vigorous, in this vicinity. Corn looks first rate. Onions are suffering much from insects.

STATE TEMPERANCE CONVENTION.—A call has been issued for a State convention of the friends of temperance, to be held in the Tremont Temple, Boston, Sept. 18th, to devise measures for sustaining the liquor law at the next election. As the repeal of this law is to be made a distinct question in the November elections, the friends of temperance must prepare to meet the struggle.

BUDDING AND PRUNING KNIVES.

It is pleasant if one has work to do, to have good tools to do it with. Many a sprightly lad has become disgusted with the process of budding, from being put at it with an old dull jack-knife, that probably did good service in cutting up "cold junk" in revolutionary times. This is often the case in holding the plow, mowing, &c. The beginner contracts awkward habits which require an unnecessary expenditure of labor, and which, perhaps, adhere to him and vex him through life.

In the above engraving may be seen samples of budding and pruning knives, which will enable the operator to do the work quickly and well, so that his trees will not suffer, provided he has skill and good judgment himself. The budding season is at hand, and these remarks may suggest to some, the necessity of preparation for it.

EARTH, OR ROAD SCRAPER.

This implement is an important labor-saving machine. It is usually called a "road-scraper," but it is just as valuable in many cases on the farm as in the road. An old and slovenly practice prevailed of throwing up furrow after furrow, next to the "runs" and walls, until they often became too large to be passed over with the team. The scra-

per is a capital implement to be used in levelling such places; so it is for excavations in digging cellars, or levelling in the fields. It is strong, but light; one of them ought to be in every neighborhood, and may be owned jointly, by several neighbors.

For the New England Farmer.

TRANSACTIONS OF THE AGRICULTURAL SOCIETIES.—NO. 2.

The next article is the Report of the Essex Society. This is a very interesting report, and contains many important suggestions. Although the Secretary is not remarkable for a condensed and laconic style, he has much experience in making reports, and does them up in a workman-like manner. This Society has from the first, reckoned among its members a large number of the most intelligent and efficient men in the county. Pickering, Saltonstall, Nichols and King, among those who have passed away, and Perry, Proctor, Newhall and Dodge, among those who remain, are men who do not occupy themselves in works of no value, and who do not trifle with their work. They are earnest men; men who build their own monuments; who leave behind them, in the moulding influence which their opinions and examples exert on the community in which they live, ineffaceable marks of their diligence, fidelity and power. When such men engage in the noble work of developing and extending the science and improving the practice of agriculture, not merely from love to the work itself, but from the higher motive of doing good to their neighborhood, to their State and to their country, we may reasonably expect important results from their labors. Of such results, the report before us affords abundant evidence. For the first time in its history, the Society continued its exhibition during two days, and if we may judge from the report, the result was highly satisfactory to all concerned.

We notice that a majority of the County Societies in the State have agreed to make the experiment of holding their anniversaries during two days. This will give opportunity for a more thorough examination of the stock and articles presented, and also for the discussion of important agricultural questions. The evening of the first day may be appropriated to this purpose, in such manner as the trustees may direct, and cannot fail to give increased interest to these farmers' festivals.

This county has adopted the laudable practice of awarding a premium for the best essay which may be presented, on some subject immediately connected with agriculture. A committee is appointed for this purpose. There can be no doubt that this practice has led to much intellectual effort, and has contributed to produce many of the excellent essays that have emanated from the members of that Society. The premium for 1852 was awarded to David Choate, Esq., of Essex, for an essay upon sheep culture, which, with a very interesting letter from Nathan Page, brings the whole subject before us. There were formerly many fine flocks of sheep in Essex County. Several of its towns are well suited to the raising of them. The granite ledges and rocky pastures of Cape Ann were, not many years ago, whitened

with flocks of sheep. The farm of the late Samuel Riggs contained several hundred. But I think every sheep has disappeared from the Cape; even the flock that used to luxuriate upon Thatcher's Island, as a perquisite to the keeper of the Light Houses, has all gone to the "tomb of the Capulets." Sheep raising has almost ceased in Eastern Massachusetts. I suppose it is every year becoming more and more difficult for New England to compete with the wool growers of Michigan and Wisconsin, and even in the raising of mutton for the eastern markets; the increasing facilities of transportation are rendering the competition every year more difficult for New England farmers. We much fear that the accurate statements and logical reasonings of the essayist, even were they backed by the eloquence of his gifted brother, will fail to restore the culture of sheep in old Essex, except so far as a few of superior quality may be raised for the shambles, by those who have peculiar facilities or a peculiar fancy for their culture. Another circumstance we notice with approbation, and that is, the accurate, concise and definite statements accompanying all articles to which premiums were awarded. Many of these statements are models of their kind, and we commend them to the imitation of farmers in other parts of the State.

We should infer from the report that the show of poultry, vegetables and stock, did not quite come up to the standard of some former years. But we have reason to know that the standard in these respects is high in Essex, and that some articles that would take a premium in some other counties, would fail to do so in this. There are no better gardeners in Massachusetts than are to be found in Essex. But they do not seem to have made much effort to display the productions of their grounds on this occasion. Perhaps this was owing to the fact that the exhibition was held at one of the extremities of the county.

The culture of root crops is receiving much attention in Essex. There are no crops that are surer, or that yield better returns. We believe that farmers throughout the State are becoming more fully convinced of their value and importance.

The exhibition of fruits must have been very fine. Nearly a thousand dishes and baskets, filled with the finest specimens of fruit, of all the varieties raised in Essex, must have been a sight well worth a visit to Lawrence. But we confess we pity the gentlemen who composed the Committee. To decide which were best among such a great variety, where all were good, must have been as difficult as it is for some bachelors to select a wife from all the girls in the country; and what makes it still harder for the Committee is, that they were bound to decide at once, whereas the bachelors often take years in making up their minds, and some even never decide at all. We have been much interested in the remarks of Mr. Ives, the Chairman of the Fruit Committee, upon the culture of the different kinds of fruit which he specifies. They show a thorough understanding of the subject and a sound judgment, and we commend them to the attention of fruit growers throughout the country.

Only one farm was presented for a premium, a circumstance at which we are not a little surprised. It must be owing, we think, to the excessive modesty of many of the young farmers in that county. Were farmers aware of the advantages that they

might derive from the suggestions of scientific and intelligent committees, while carefully examining their farms and crops, they would take more pains to secure such visits than they now do. We have often thought that a portion of the funds of our Agricultural Societies could not be better expended than in paying the expenses of such committees. And we would respectfully suggest that it would be well to appoint several committees in each county, and make it their duty to visit and examine a certain number of farms in each town every year, with the view of advising their proprietors in the conduct of their farms, and encouraging them in their efforts after better and more scientific modes of cultivation. These visits should not be confined to good farms, where they would be most readily received, but are least needed, but should have special reference to those farms that are suffering from the want of well directed enterprise on the part of their proprietors. Many a man who is now discouraged, and has made up his mind that farming is miserable business, might be encouraged to renewed effort, and put in the way of attaining more successful results than he has before done. But we have not time to follow out in detail the advantages that would result from the appointment of such committees, especially if, after visiting several farms in a town during the day, they should meet the farmers of the town in some central place, and spend the evening in social conversation upon agricultural subjects. We have not time to allude to many topics of interest that are suggested by this report.

The address of Gen. Oliver must have been listened to with much interest. It breathes the right spirit, and is highly creditable to him as a man of taste and general information. There is a poetic vein running through it, which must have found a sympathizing chord in every breast possessing the least spark of poetic fire, or the least warmth of imagination.

J. R.

Concord, Aug. 8, 1853.

MR. WEBSTER'S MANSION.

We visited the late residence of Mr. Webster, at Marshfield, last week, and enjoyed the privilege of going over the grounds and house, which have so recently been rendered sacred by the death of their illustrious proprietor. Nearly everything about the premises remains as it was before Mr. Webster's decease, although the only occupants are the servants who have charge of the mansion. The property is still in the hands of the trustees appointed by Mr. Webster, and it is yet doubtful whether it can be preserved in the family entire, according to his wishes, the demands against the estate having proved larger than was anticipated. Mr. Fletcher Webster still resides on his own place, about a mile from his late father's mansion.

We were agreeably disappointed in Marshfield. However bleak and dreary it may have been originally, taste and money have certainly done much towards making a paradise of that portion of the town which Webster selected for his home. The smooth lawns, which our August rains have clothed

in "living green,"—the beautiful fields and swelling uplands, stretching away as far as the eye can see, in every direction,—the nicely trimmed English hedges, with ornamental trees interspersed, lining the carriage road to the house,—the orchards, burdened with ripening fruit,—the large and majestic shade tree in front of the house, the branches of which trail upon the ground,—the sweet little ponds, with flocks of aquatic birds dotting their surface,—the extensive barns, poultry-yards, hot-houses, &c.,—and last, though not least, the fine gardens, both floral and vegetable—all testify that Mr. Webster's farming was on as princely a scale as his more intellectual efforts.

The mansion is spacious, and is in such perfect order that it has little of the ancient look which we expected to see. It is furnished with much elegance, but everywhere evinces a taste for the simple and substantial, rather than the gorgeous and extravagant. Many fine portraits adorn the walls, among which we were pleased to see one of Monica, Mr. Webster's favorite black cook. The library is a lofty and beautiful apartment, and its shelves are still loaded with valuable books. We looked with deep interest upon the chamber in which the great statesman breathed his last. It is one of the most plainly furnished rooms in the house, but is the chief point of attraction to visitors, who linger reverently and silently around the spot where one of the noblest of human intellects underwent a translation from a mortal to an immortal state. That most impressive and memorable death-scene will be held in remembrance so long as the Christian religion endures.

The tomb of Mr. Webster is in the old Marshfield burying-ground, about one-fourth of a mile from the mansion. The lot is enclosed within an iron fence, and separated from the estate only by a carriage-road. The tomb itself has been covered with earth and sods, and presents the appearance of a green mound. It is surmounted by a plain white marble slab, which bears the simple inscription, "Daniel Webster." The day we were there, workmen were engaged in setting up the small marble monuments, concerning which Mr. Webster gave directions during his last sickness. They are four in number, and are arranged on a line in front of the tomb, all being of the same size and style. One of them bears the name and age of Mr. Webster, with the epitaph which he dictated, expressing his testimony to the truth of Christianity. The other monuments are in commemoration of his first wife, and of his deceased children and grand-children, and all bear appropriate epitaphs. Within a rod or two of this spot, is the tomb of Gov. Edward Winslow, who moved to Marshfield in 1637, and settled on land now belonging to the Webster estate; and all around are thickly scattered the graves of the Puritan fathers and mothers of the "Old Colony," many of which are un-

marked, save by rough, unlettered stones, taken from the adjoining fields or highways. An ancient grave-yard is always a place of interest; but doubly so is this venerable cemetery, in whose bosom is deposited not only the ashes of some of the fathers of New England, but also the precious dust of the foremost man of our own times.

THE PALMER WORM.

The Boston papers speak of this destructive insect as one that has made its appearance this season for the first time for many years. So far as this part of the country is concerned, the insect is by no means a new comer. A gentleman in this place informs us that he has been fighting this worm for twenty years. Many of the trees in this vicinity have this year been stripped of their foliage, but according to his general habits it is about time for the worm to disappear for the season. Those who have exercised vigilance and care in removing the insects' nests, and have freed their trees daily of these troublesome customers, have succeeded in preserving the foliage and fruit of their orchards.—*Yarmouth Register*.

REMARKS.—Mr. WILSON, a nurseryman at Windham, N. H., while we were looking at the destruction the worms had made among his trees, the other day, said the same worm had been familiar to him for twenty years, but only few in number, until the present season.

PROSPECTS OF THE CROPS.

During the first week in August, we had abundant rains. It came moderately, and without much wind, so that the crops have not been torn or beaten down. The ground now is thoroughly saturated, in all this region, as far as the roots of plants usually extend.

Corn never looked better, and is growing with great rapidity. If no untimely frosts touch it, the crop will be heavy.

Wheat, barley and oats have been materially benefited by showers about the last of July, so that the heads are better filled than was anticipated.

A north-easterly storm has prevailed now, Aug. 8, for several days, and has caught in the swath, cock, or stook, a large amount of hay and grain. Some of the meadows will be flooded, but not much loss incurred in consequence, as the low ground grass was growing vigorously when the storm commenced.

The aftergrass and the fall pastures must now be very fine, and will undoubtedly lessen the price of hay.

Cattle Market at Manchester, N. H.—The subject is being agitated of establishing a Cattle Market at Manchester, N. H. There is no market of the kind in the State. The plan is to procure a piece of land containing ten or twelve acres and prepare it in a suitable manner to accommodate the Cattle Market, and also the State and County Fairs. It is estimated that \$100,000 is now annually paid in Manchester for meats.

For the New England Farmer.

BLAST ON POTATOES.

MR. BROWN:—Within a week a great change has taken place in the appearance of potatoes; the vines of some varieties have suffered much more than others, such as the White Chenango, Sandwich Island Reds, &c. I think potatoes will rot baldy, this year. The crop with me will be cut short at least one-third, if not half, on the late potatoes. The new variety, Davis Seedling, does not appear to be so tender as some others. I am taking some notes on potatoes, that I may send you some day, if you would like them. As yet we have found but few rotten potatoes, though in passing fields I have noticed a strong smell, as though the tubers were more or less rotten; one of my neighbors told me he could smell his potato field twenty rods when the wind was right.

Present appearances are unfavorable to good crops of good potatoes. J. F. C. H.

Newton Centre, Aug. 10th.

EXTRACTS, REPLIES, &c.

D. F., *Sandwich, Mass.* Your article will be given next week. Hope to hear from you again.

J. H., *Temple, N. H.*, will accept our thanks for his interesting communication in regard to Swallows. We hope to collect facts from all parts of New England in relation to them, and always feel obliged to our friends for any information they can impart. At some future time, we shall endeavor to satisfy the farmer, that these birds are among the best friends that he has, and that their destruction would be followed by evils which might justly be termed, a calamity!

J. F. H., *Newton Centre*, will please consider his health most excellent, for an hundred years to come, so far as our wishes can establish it in full bumpers of his pure currant wine! Will he communicate the precise mode of making it?

M. A. P., *Watertown, Mass.*, will be able to obtain the white blackberry of Mr. J. S. NICHAM, of Danvers, Mass. He may find an engraving of the plant in last year's volume of the *Farmer*, page 418.

"A. W. C.," *Sheldonville, Mass.*, says the cure for garget is to wash the udder in cold water until the inflammation subsides. This will cure if anything will. The sooner it is tried after the cow is attacked the better. The way to prevent the garget, is to keep the cow on uniform feed, not changing suddenly from poor to good.

"S. E. HOOKER," *Poultney, Vt.*, says the dry weather has essentially affected the crops in that section of country. The palmer worm has injured the fruit, and the "grasshopper has become a burden."

The Editor of the *Hampshire and Franklin Express*, at Amherst, Mass., will please accept our thanks for the intelligent article on SWALLOWS, in his paper of the 19th of August. It will find many delighted readers.

It is a matter of surprise, that on questions which would seem of so easy solution, it is not settled yet at what particular time the swallows leave New England for the South, or whether any of them retire to the mud for a winter retreat.—Mr. WHITE, of Selborne, one of the most accurate naturalists of any age, *had no doubt* that they do hibernate. And although our obliging friend of the *Express* is equally as confident that they do not, we hope to be able bye-and-bye to adduce such evidence as to convince the most skeptical, that swallows do sometimes pass the winter in the margins of ponds in a state of torpidity! This subject, as well as all others of a kindred nature, is to us intensely interesting, and the doubts which hang over them all, show how partial and inconstant has been the observation of nearly all persons upon them.

DISCOVERIES AND IMPROVEMENTS.

— A new and very useful application of the Daguerreotype art has been discovered by Robert Langton, wood engraver, of Manchester, England. The discovery consists in applying photography to blocks of polished boxwood, such as are ordinarily used in his own art for wood engraving, thus rendering the blocks ready for the application of the engraver's burin. This discovery will be of invaluable service, as it will save the expense of employing draughtsmen to mark the blocks previous to engraving. Drafts of complicated machinery in perspective, and other difficult sketches, which required much time, expense and skill in the preparation of blocks for engraving, can now be produced in a moment with the light of the sun.

— A "saloon car," combining elegance, comfort and sociability to an extent not before realized on our railroads, has been placed on the Hudson River Railroad. It is thus described by the *Albany Evening Journal*:—

"The body of the car, is of the length and nearly a foot wider than those in ordinary use. It has a hall on the right hand side, about three feet wide, out of which four saloons open, capable of seating eight persons each, and one for four persons. In the larger saloons is a sofa, five chairs, a centre table, and a magnificent mirror. The paneling is beautifully ornamented with landscape and other paintings; the windows and blinds are especially adapted for ventilation and for the exclusion of dust and cinders; and the whole is splendidly unique, neat and spacious. It is just what was needed for family and other parties, who, in their journeyings, desire to be alone. The fare will, of course, be more than in the ordinary cars, because it contains fewer seats."

— Gutta Percha Varnish is said to be a very effectual means of preserving writings, charts, bank bills, and pictures, as well from injury by time as from forgery or alteration. The process consists merely of running a very delicate coating of gutta

percha solution over the surface of the article. It is perfectly transparent, and it is said to improve the appearance of pictures. By coating both sides of an important document, it can be kept in the best preservation. It renders it water-proof, and the plan would thus be a valuable one for ship charts.

— A correspondent of the *Railroad Record* is of opinion that curvature on railroads is the main cause of accidents, whether by collision or otherwise. Straight lines must, in the end, be adopted; and, though at first more expensive, they are in the end more economical, and are certainly safest. Curves, the writer contends, should be limited by law, and states that one degree curve, or 5,130 feet radius, offers as much resistance to a train as a grade of ten feet to the mile. Two degrees equal fifteen feet; three degrees equal twenty feet; four degrees equal twenty-five feet; five degrees equal thirty feet; six degrees equal thirty-five feet—that is, if a six-degree curve be located upon a level, it offers the same resistance to a train as would a grade of thirty-five feet to the mile, on a straight line.

— The following patents have recently been issued: John Binder, of Chelsea, Mass., for improvement in hinges for folding bedsteads. Thomas Crossley, of Roxbury, Mass., for improvement in printed carpets. Benjamin F. Delano, of Chelsea, Mass., for improved rudder-brace. John P. Schencke, of Boston, Mass., assignor to John P. Schencke and Adolphe S. Saroni, of same place, for improvement in breech-loading fire-arms.—Aury G. Coes, of Worcester, Mass., for improved screw-wrench. William Coleman and Stephen G. Coleman, of Providence, R. I., for improved ship's block. Abijah R. Tewksbury, of Boston, Mass., for improved boat or scow. Henry Stanton, of the Army of the United States of America, for improvement in discharging breech-loading fire-arms.

Advertising Department.

☐ A limited number of advertisements of an appropriate character will be inserted in the monthly Farmer at the following

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Middlesex Agricultural Society.

THE Committee appointed to view Farms in Middlesex County will enter upon their duties on Monday, the 5th day of September, 1853.

All persons who wish to enter for premiums on Farms, Orchards, and Meadows, are requested to make application to the Secretary at Concord, or either of the Committees, before the first day of September.

CHARLES BABIDGE, Pepperell. } Committee.
SAMUEL CHANDLER, Lexington. }
SIMON BROWN, Concord.

July 23, 1853.

6w

Fishkill Landing Nursery.

2½ MILES NORTH FROM THE NEWBURGH FERRY.



THE subscriber respectfully solicits the attention of FRUIT GROWERS and dealers in Fruit Trees, to his large stock for sale this fall, consisting of FORTY THOUSAND APPLE TREES, of the most approved varieties, 6 to 10 feet high, at 14 cents each, or \$12 per hundred.

TWENTY THOUSAND PEAR TREES,

embracing all the varieties in general cultivation, 5 to 7 feet high, 30 cents each, on Pear stocks. On quince the trees are very thrifty, and include, in addition to the leading standard sorts, many of the new varieties of recent introduction, which promise well.

THIRTY THOUSAND CHERRY TREES,

two to three years old, of nearly all the popular kinds in cultivation:—Dwarfs, on Mahaleb stocks, of the choicest varieties, can also be supplied, 6 to 8 feet high, \$18 to \$30 per hundred.

TWENTY THOUSAND PLUM TREES,

of the most highly esteemed sorts, 34 cents each, \$30 per hundred; Trees thrifty, pretty, and of fine size.

A large stock of Apricot, mostly on Plum stocks, at \$30 on Plum, \$12.50 on Peach, per hundred.

THIRTY THOUSAND PEACH TREES,

of the most valuable standard varieties, one to two years growth on the inoculation, 10 cents each, \$8 per hundred. No peach pits are planted but from a district where the "Yellows" has not yet made its appearance.

The stock of Isabella and Catawba Grape Vines is very large, two to four years old, with fine roots; having been annually cut back, they are in fine condition for vineyard planting—\$10 to \$15 per hundred.

TWO THOUSAND QUINCE TREES,

mostly of the Apple variety; Currant and Raspberry bushes, Strawberry plants, Hybrid Perpetual and other Roses, &c. &c.

FIFTY THOUSAND Deciduous and Evergreen Ornamental Trees, suitable for Lawns and Avenues, many of which are of large size and fine form—among which are 10,000 Arborvitæ, 1½ feet to 5 feet high, \$12 to \$30 per hundred. (Not from the State of Maine.)

EIGHTEEN THOUSAND Balsam Fir, 1½ to 5 feet high, at from \$15 to 30 per hundred—together with Norway Spruce, Native Spruce, Scotch, Austrian and Weymouth Pines, Junipers, Decar Cedar, Cedar of Lebanon, English and Irish Yew, &c.

FIVETHOUSAND Red Cedars, of suitable size for screens.

The most highly prized varieties of the Apple, Peach, Pear, Plum, Apricot, Cherry, &c., which have recently originated in this country and Europe, have been procured as early as practicable, and tested, or are in the course of being tested, on the grounds of the proprietor. The new and rare Deciduous and Evergreen Ornamental Trees are annually imported, of which fine plants can be furnished. 4,000 seedling Oaks and Elms, imported four years since, are among the Deciduous Trees, many of them very remarkable in their growth and appearance.

The past summer has been favorable, and trees of every description have made a fine growth.

The Nursery is located within 2½ miles of the Hudson River Railroad Depot, at Fishkill Landing. Steamboats run daily to New York and Albany, from Newburgh.

Trees, &c., when ordered will be taken up carefully, correctly labelled, packed in the best manner, forwarded agreeable to order, and with the least possible delay. Charges for packing made only to cover cost.

Catalogues sent in exchange for a letter stamp.

DANIEL BRINCKERHOFF.

Fishkill Landing, N. Y., Aug. 18, 1853.

Super-Phosphate of Lime,

IN bags and barrels, made by C. B. DEBURG, a warranted pure and genuine article, with full directions for use. For sale by GEO. DAVENPORT, 5 Commercial, corner of Chatham St., Boston, agent for the manufacturer. Also, for sale, Ground Bone, Bone Dust, Burnt Bone, Guano, and Grass Seeds of reliable quality. March 26, 1853.

Garden Seeds.

WE respectfully solicit the attention of purchasers of GARDEN SEEDS to our extensive stock, which we offer for sale. We have all the sorts of Vegetable Seeds that have proved worthy of cultivation; also, Grain, Grass and Flower Seeds. All the varieties are raised and selected expressly for our trade, and we do with confidence recommend them to all who desire to procure seeds that will prove true to their names. Catalogues gratis, on application.

RUGGLES, NOURSE, MASON & CO.,
Over Quincy Market, Boston.

Jan. 1.

Highland Nurseries, Newburgh, NEW YORK.



A. SAUL & CO., in calling the attention of their patrons and public in general to their very extensive stock of Fruit and Ornamental Trees, Shrubs, &c. &c., which they offer for sale the coming autumn, would remark, that owing to the past summer being one of the most favorable for the growth of trees which they have had for many years in this vicinity, their stock of trees and plants in every department is large, more thrifty, and in every respect finer than usual.

To particularize within the limits of an advertisement would be impossible; they therefore refer planters and dealers in trees to their Catalogue, a copy of which will be sent to all post paid applicants, on enclosing a Post Office stamp for the same.

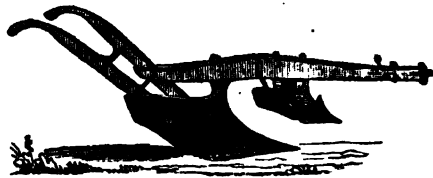
They invite especial attention to their stock of Standard and Dwarf Pear Trees, which are unusually fine; also Cherry Trees, as well as Plum, Peach, Apricot and Nectarine; also Grape Vines, Gooseberries, Currants, Raspberries, Strawberries, &c., in every known variety.

500,000 very strong two year old Osage Orange Plants, in three sizes, at ten, eight, and six dollars per 1000. Together with Buckthorn Plants, Arbor Vitæ, &c.

Highland Nurseries, Newburgh, N. Y., Sept. 3, 1853.
2t

THE BOSTON AND WORCESTER

EAGLE DOUBLE PLOWS.



THE superior merits of these Plows, consist in,

1. The mode of attaching the forward mould-board to the beam, by which great strength and durability are secured, as also the various desirable changes in depth of work, and relative depth of each plow, the same being regulated to any shade of nicety, with perfect facility.

2. The entire and handsome overturning of the sod furrow, by the forward mould-board, to the extent of the whole width of furrow taken by the plow, placing it beneath, out of the way of the teeth of the harrow, cultivator, or other implement, so that it is in no case dragged to the surface in the after-cultivation of the crop.

3. The thorough and finished work done by the rear mould-board, in taking up its furrow of under soil and sifting or scattering it over the inverted sod, so as to entirely fill to the surface, and at the same time break open any undue cohesion of the soil, leaving the plowed land in a finely pulverized condition, requiring little labor with the harrow or other surface-working instrument,—and indeed, in all tolerably free loams, rendering the use of these instruments, as pulverizers, quite unnecessary.

4. The remarkably light draught of the plow, in proportion to the amount of work and the thoroughness of pulverization accomplished.

Several sizes of the BOSTON & WORCESTER EAGLE DOUBLE PLOW, are made by the subscribers, from patterns of their own original invention. They invite their friends and customers to examine these Plows, as to quality and durability, of material, thoroughness and finish of construction, and to test their working properties.

Manufacture at Worcester, and Warehouse Quincy Hall, over the Market, Boston.

RUGGLES, NOURSE, MASON & CO.

April 30, 1853.

Church and Barn Vanes.

THE Vane as used on either churches or barns combines both usefulness and ornament. The subscriber has had many years' experience in the making of Vanes, and has manufactured a large number which have given uniform satisfaction. His patterns have been procured at much pains and expense, and embrace quite a variety of those most approved and sought after. His construction of Vanes is under his own eye and of the best and most durable material, copper only being used. Those in want of Vanes for either churches or barns, are invited to make trial of those made by the subscriber. On the score of expense, strength and beauty, they will be found to be what is required.

I. S. TOMPKINS,
54 (formerly 21) Union, near Hanover St., Boston.
May 21, 1853.

The Farmers' Library.

JUST RECEIVED, the following assortment of Agricultural and Horticultural Books, embracing the standard works of eminent American and European writers, on the Farm, the Orchard, the Garden, &c. &c.

	PRICE.
American Farm Book, by Allen,	\$1.00
Farmer's Treasure, by Faulkner and Smith,	.75
Dana's Muck Manual,	1.00
Prize Essay on Manures, by Dana,	.35
American Muck Book, by Browne,	1.35
Lectures on Practical Agriculture, by Johnston,	.75
Elements of Scientific Agriculture, by Norton,	.50
Principles of Agriculture, by Theor,	2.50
Practical Agriculture, by Johnstone,	.75
Agriculture for Schools, by Blake,	1.30
Catechism of Agriculture and Chemistry, by Johnstone and Norton,	.35
American Agriculturist, by Allen,	1.00
Liebig's Complete Work on Chemistry,	1.00
Farmer's and Emigrant's Hand Book, by Marshall,	.75
Home for all, by Fowler,	.50
Book of the Farm, by Stephens and Skinner,	4.00
Cottage and Farm Houses, by Downing,	3.00
Downing's Country Houses,	4.00
Rural Architecture, by Allen,	1.35
Downing's Landscape Gardening and Rural Architecture,	3.50
Downing's Cottage Residences,	3.00
Fruit Garden, by Barry,	1.35
Complete Gardener and Farmer, by Fessenden,	1.35
Bridgeman's Gardener's Assistant,	3.00
Bridgeman's Kitchen Gardener's Instructor,	.50
American Fruit Culturist, by Thomas,	1.00
Gardener and Complete Florist,	.95
Florist's Guide, by Bridgeman,	.50
New England Fruit Book, by Ives,	1.35
Youatt and Martin on Cattle, by Stevens,	.85
Rose Culturist,	.85
Johnson's Gardener's Dictionary, by Landreth,	1.50
Rural Economy, by Soumeigault,	1.00
American Rose Culturist,	.35
Bigelow's Plants of Boston,	1.35
Genera of Plants of the U. S., by Gray, 3 vols.	13.00
Gray's Botany,	2.00
Farnell's Chemistry,	1.00
New England Farmer, by Cole,	1.00
Ladies' Guide and Skillful Housewife, by Mrs. Abel,	.35
Hive and Honey Bee, by Richardson,	.35
Bee Keeper's Manual, by Minor,	.50
Bird Fancier, by Browne, paper 25 cents,	.50
Townley on Bees,	.50
American Poultry Yard, by Browne,	1.00
American Poultryers' Companion, by Bement,	1.00
American Fowl Breeder, by Moore,	.35
American Herd Book, by Allen,	3.00
American Shepherd, by Morrill,	1.00
Domestic Animals, by Allen,	.75
Diseases of Animals, by Cole,	.50
Hints to Sportsmen, by Lewis,	1.35
Dad's Anatomy and Physiology of the Horse,	1.00
Mason's Farmer and Stud Book, by Skinner,	1.35
Management of Sheep, by Canfield,	1.00
Youatt on the Pig,	.60
Knowlson's Complete Cow Doctor,	.35
Horse Doctor,	.35
Greenon's Treatise on Milk Cows,	.35
Treatise on Hot Houses, by Leachman,	1.00
Allen on the Grape,	1.35
Schenck's Text Book,	.50
Breck's Book of Flowers,	.50
Downing's Fruit and Fruit Trees,	.75
For sale at the Publishers' prices by RUGGLES, NOURSE	1.50
MASON & Co., Quincy Hall, (over the Market,) Boston.	
Jan. 1, 1853.	1P

Farm in Westboro', Mass.,



For sale or exchange, for Boston property, situated on the old Grafton road, within 1 mile of the Railroad Depot, containing 27 acres of as good land as any other 27 acres laying in one body, in the town; it is elevated about 75 feet above the railroad, and overlooks the town, and is within 7 minutes walk of three churches and the town house, which for healthy location is unsurpassed. The buildings consist of a modern house, built by Boston mechanics in 1851, and is 32 by 28 feet, with a kitchen attached, 16 by 28 feet, two stories high, with a cellar under the whole. Wood-house, 16 by 20 feet; work-shop 16 by 12 feet; carriage and hen house, 16 by 21 feet; poultry yard, 30 by 58 feet, enclosed by star fence 8 feet high; barn, 60 by 36 feet, with cellar under the same, so divided as to give a vegetable cellar containing about 2000 bushels; cistern and well water is brought into the house, and all the wash of the kitchen and privy is conducted by a drain to the barn cellar; likewise a farm house 24 feet square, 11 stories high, cellar under the same; there are three good wells of water and one good brick and cement cistern on the premises. There are now on the farm 142 large apple trees, mostly grafted, also 220 young thriving apple trees, mostly Baldwin, from 4 to 8 years from the bud, some of them have borne fruit; likewise 34 peach trees of early choice variety, 10 pear trees, &c. There has been taken from the farm the past year, 30 tons of hay, 375 bushels of corn in the ear, 700 bushels of carrots, beets and 8 turnips, 80 barrels grafted fruit, besides vegetables used in the family. For further information, apply at this office, of Messrs. SIMON BROWN or WILLIAM SIMONDS; at Westboro', of Messrs. FAYE-WETHER & GRIGGS.

Feb. 5. 1853

1P

Haying Tools.



1000 dozen superior Grass Scythes.

PHILLIPS, Mosser & Colby's—Darling's—Farwell's—Mansfield & Lamb's—Koyce & Dunn's.

Also, Lawn, Grain and Bush Scythes, of the best quality.

1000 dozen Scythe Sneathes.

Patent Grass, Lawn and Bush Sneathes, from the best manufacturers in the country.

2500 dozen Hay Rakes.

Half's, Simonds's, Carpenter's, Page & Wakefield's, Robinson's, Duggan's and English best Hand Rakes.

500 Drag Rakes.

This Rake is a hybrid between the Hand and Horse Rake every good farmer should have one or more.

3000 dozen Scythe Rifles.

Clerk's celebrated Whetstone Grit and Emery Rifles. Also, Austin's, Anson's, Willard's, and others.

200 gross Scythe Stones.

Quinebaug, Chocolate, Norway Rag and Indian Pond; also, Woodward and Talacre (English) Scythe Stones.

20 tons Grindstones.

A well selected assortment of the celebrated Blue Sheet, warranted. Also, Grindstones of all sizes, mounted on frames and rollers complete.

Grindstone Fixtures, viz: Flanges, Arrows, Cranks and Rollers.

800 Horse Hay Rakes.

Delano's Patent Revolving and Spring Tooth Hay Rakes; all of which will be sold at wholesale or retail, at very low prices, by RUGGLES, NOURSE, MASON & CO.

Over the Market, Boston.

June 25, 1853.

English Fancy Lop-ear Rabbits.

THE undersigned will be happy to show a choice lot of imported Lop-ear Rabbits, to gentlemen interested, at his residence in Melrose. This stock is from the best in England, and was selected with care. I have a few young Rabbits for sale, which will be ready to deliver in July and August.

Address, GEO. F. BURNHAM, Box 22, Post-office. Boston, June 11, 1853. 4w*3

Alderney Calves for Sale.



FROM MR. WEBSTER'S STOCK.

2 Bull Calves, thorough bred.

1 Bull Calf, 1 Alderney, 1 Ayrshire.

Address "A," Box 416 Boston Post Office.

Aug. 20, 1853.

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Old Colony Nurseries.



Wanted, 5 to 10,000 Apple Stocks of good quality. Apply to B. M. WATSON, Old Colony Nurseries, Plymouth, Mass., where may be had every variety of Fruit and Ornamental Trees and Shrubs, Plants, Green-house Plants, &c.; also, Pear, Cherry, Plum, Paradise and Mahaleb Stocks, for Nurseries.

A great variety of young Ornamental Trees and Shrubs, from \$3 to \$10 per 100, for Nurseries or ornamental planting Dahlias, Verbenas, Roses, Pea Heliotropes and Fachries, new dwarf Chrysanthemums, (100 sorts,) Phloxes, Iris, Herbaceous Plants, Japan Lilies, &c., in great variety, including many no velities lately imported. Strawberry plants in 20 varieties. Carriage paid to Boston. Catalogues gratis, and prepaid on receipt of one stamp.

Feb. 26.

tf

Strawberry Plants, &c.

100,000 FINE Strawberry Plants, of the following kinds:—Fay's Seedling, Richardson's Early, Richardson's Late, Hovey's Seedling, Boston Pine and Scotch Runners.

1000 DUTCH CURRENT BUSHES, red and white. A lot of Horse Chestnut, Larch and Maple Trees, 6 to 8 feet high. For sale by PARKER & WHITE,

69 & 63 Blackstone Street, Boston.

Aug. 27, 1853.

4w

NEW ENGLAND FARMER

Is published on the first of every month, by JOHN RAYNOLDS and JOEL NOURSE, at Quincy Hall, South Market St., Boston.

SIMON BROWN, Editor.

FREDERICK HOLBROOK, } Associate
HENRY F. FRENCH, } Editors.

Terms, \$1.00 per annum in advance.

All subscriptions to commence with the volume, Jan. 1. The FARMER, is devoted exclusively to Agriculture, Horticulture, and their kindred Arts and Sciences; making a neat volume of 576 octavo pages, embellished with numerous engravings. It may be elegantly bound in muslin, embossed and gilt, at 25 cts. a volume, if left at the office of publication.

Also published at the same office every Saturday, on a large handsome folio sheet, the

NEW ENGLAND FARMER, (WEEKLY,)

An Independent Agricultural Family Newspaper.

The News and Miscellaneous departments under the charge of WILLIAM SIMONDS, will include a full and careful report of the news of the Markets, and the news of the week, such as Domestic, Foreign and Marine Intelligence, Congressional and Legislative proceedings, Temperance and Religious Intelligence, and a general variety of Literary and Miscellaneous matter, adapted to family reading, comprising more useful and valuable reading matter than any other Agricultural Newspaper published in New England. Everything of a hurtful or even doubtful tendency will be carefully excluded from its columns.

Terms \$2.00 per annum in advance.

The monthly contains nearly the same matter as the Agricultural department of the weekly.

Postmasters and others, who will forward four new subscribers on the above named terms, for either publication, shall receive a fifth copy gratis for one year.

All orders and letters should be addressed, post-paid,

RAYNOLDS & NOURSE,

QUINCY HALL, SOUTH MARKET STREET, BOSTON.

POSTAGE.—The postage on the New England Farmer monthly, is 14 cents per quarter, or 6 cents per year, to any part of the United States, to be paid in advance at the office where the same is received.

AGRICULTURAL

WAREHOUSE AND SEED STORE.

QUINCY HALL, OVER THE MARKET, BOSTON.

THE Proprietors having recently enlarged their Warehouse, and increased their works at Worcester, would respectfully invite the attention of Planters and Dealers in AGRICULTURAL & HORTICULTURAL IMPLEMENTS, GARDEN and FIELD SEEDS, &c., to their stock, comprising the largest and best assortment to be found in the United States, which are offered at low prices.

OF PLOUGHS—we have the greatest variety of kinds and sizes.

Improved Sod Ploughs, for flut furrows—Improved Scotch Ploughs for lapped furrows—Improved Stubble Ploughs, which are especially adapted to deep tillage, or varying from 6 to 12 inches in depth.

Self-sharpening, Hill Side, Sub-soil, Double Mould, Corn, Cotton and Rice Ploughs.

Cylinder Hay Cutters, Smith's Patent Lever Gate, and others. Patent Corn Shellers, with and without Separators. Seed Sowers, of various sizes and prices. Batchelder's patent Corn Planter, improved. Fanning Mills of various sizes, Horse Powers, Threshing Machines, thermometer Churns, Robbins' patent Centrifugal Churn, Cylinder Churn, Dash Churn, Corn Planters, together with almost every article wanted on the Plantation, Farm or Garden.

Illustrated Catalogues sent gratis on application, post paid RUGGLES, NOURSE, MASON & CO.
Boston and Worcester, Mass., Jan. 1, 1863

tf

Pure Bred Fowls.



For sale at a moderate price, if applied for soon, White and Buff Shanghaes, Gold and Silver Spangled Hamburg or Phoenix, Black Spanish and Bantam Grays; also, Java Pen Fowls, Black Norfolk Turkeys and Bremen Geese. These Fowls are from imported and prize stocks, and very fine, and can be forwarded by express at short notice. For further particulars address

H. H. LITTLE,

East Marshfield, Plymouth County, Mass.

Aug. 20, 1853.

6w

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. V.

BOSTON, OCTOBER, 1853.

NO. 10.

RAYNOLDS & NOURSE, PROPRIETORS.
OFFICE, . . . QUINCY HALL.

SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

CALENDAR FOR OCTOBER.

"The woodpath is carpeted over with leaves,
The glories of AUTUMN decay;
The Goddess of Plenty has bound up her sheaves,
And carried the Harvest away."

BRYANT, in his beautiful poem on the "Death of the Flowers," where he so vividly describes our autumn scenery, says,—

"The melancholy days are come, the saddest of the year,"—and in so saying, only utters the common sentiment of nearly all our people. There is, in one sense, a melancholy aspect in the dying year.—The bright fulness and vigor of the grass and leaves and flowers, has shrunk and bowed a little, as the first touches of age and care upon a beautiful woman. "Every day a flower drops from out the wreath that binds its brow—not to be renewed. Every hour the sun looks more and more askance upon it, and the winds, those summer flatterers, come to it less fawningly. Every breath shakes down showers of its leafy attire, leaving it gradually barer and barer, for the blasts of winter to blow through it. Every morning and evening takes away from it a portion of that light which gives beauty to its life, and chills it more and more into that torpor which at length constitutes its temporary death. And yet October is beautiful still, no less 'for what it gives than what it takes away;' and even for what it gives during the very act of taking away."

Spring brings its gentle airs, its bursting buds and expanding flowers, and summer puts on its full dress of "living green;" but autumn, like the lady who doubts whether her charms are as attractive as they once were, puts on her livery of many hues, and sports in gorgeous colors.

OCTOBER is an important month to the farmer in many particulars. Great care is necessary in preserving the crops he has labored so assiduously to obtain, and in preserving the seeds upon which he is to depend for future crops.

APPLES.—Unusual care with this fruit will be

well repaid this year by the high price which they will command. Apples will keep better by being placed on frames in a cool cellar as soon as taken from the tree; or, if put in barrels, place them at once in the cellar, rather than leave them out exposed during the day to the hot sun and to the low temperature of the nights. These constant changes are injurious. Great care is necessary in the first place, in picking and assorting them.—Half a peck of bad apples in a barrel would spoil the sale of the whole with many a good customer; assort them into different grades, and the high price on the best will bring up a fair average on the whole. All articles sent to market should be assorted in this way. Sales are then quick, as the whole matter is readily understood by both parties.

ROOTS.—Sugar beets and mangel wurtzel should be secured before any severe frosts occur. But as soon as arrived at maturity, which may be known by the discolored and dead leaves, they should be harvested, or they lose some of their nutritious properties.

RUTA BAGA, and flat turnips may remain till the ground begins to freeze; they still grow when heavy frosts occur, and when the weather is quite cold.

CABBAGES may also remain out till snow falls. A fine way to preserve them for winter use is to dig a trench in the cellar, and after taking the plants up, roots and all, set them closely in the trench, where they will keep fresh and hard till spring, if the light is excluded.

CAULIFLOWERS may be kept in the same manner, and will throw out fine heads on plants that had but just begun to head when taken from the garden. But they must have the light.

All roots that have come to maturity and are placed away for winter use, are better for having the light excluded.

SQUASHES.—These may be kept through the en-

tire winter by hanging them up in rooms where they will not freeze. They surely rot if laid in a mass, touching each other.

PUMPKINS may be packed in straw or hay in warm barns and kept a long time without freezing, and then make a change of food for milch cows which they highly relish. ♦

SEEDS.—Too much care cannot be taken to preserve the best seeds for future planting, and have them placed where they will be free from the depredations of mice, and from dampness. It is a poor time to hunt up seeds and decide what it is best to sow and plant after the soil is ready for the seed.

TIMBER AND FUEL.—It is said that timber and fuel cut from July to November is more valuable than if prepared at any other season.

HUSKING.—This work is too often done in a careless and slovenly manner. The tips and butts of the ear should be taken off, as well as the silks. To do this work well, pays well in the end.—Large quantities of corn piled in the barn at once, are liable to heat, and injure the grain. It is much less liable to hurt in the field.

OCTOBER is one of the most delightful months of our climate. No blight has fallen upon the crops to make futile the labors of the farmer's hands, and amid the ingathering of the bountiful products of the year, he ought to possess a constantly grateful heart, and realize a great deal of enjoyment.

For the New England Farmer.

NORTHERN APPLES.

MR. EDITOR:—At the State Fair recently held at Montpelier, several varieties of apples which were new to me were presented by Mr. Bailey, of Plattsburgh, N. Y., a gentleman of much urbanity, and of great intelligence in all matters relating to the growing of fruit. Perhaps your readers are better acquainted with them than I am. But they seemed to me worthy of a passing notice.

The *Bailey Spice*, a seedling which Mr. Bailey has introduced, is a beautiful white apple, with furrows running from the stem to the calyx, of medium size, sprightly, pleasant, comes to maturity about the last of September, a fine apple for the table and for cooking.

The *Champlain* is a smaller white apple. The flesh is white and delicate, of agreeable flavor. The *Sally Autumn*, a delicate light red apple, tapering towards the calyx, ripe in October. The *Waltham*, a small white apple, with a rich blush on one side, and the *St. Lawrence*, a good sized apple, green, with a few red stripes near the stem, rather tart for a table apple, but juicy, and good for cooking, hardy and a good bearer. He had also some fine specimens of the *Alexander*, an apple I think already known to our nurserymen—a large, fine looking red apple, and the *Rosseau*, which I need not describe. The first four varieties seem to me worthy of attention. I think if

introduced into our gardens, they would become larger under the influence of our more genial climate. The *Bailey Spice* would probably reach maturity early in September, as it would blossom somewhat earlier with us, and would prove a fine fall apple. Perhaps it would equal the *Porter*, which it somewhat resembles. At any rate, it would increase the number of our fine autumnal apples; I have engaged some grafts for next spring. Mr. B. will supply all orders for them.

Yours, &c.,

J. R.

Concord, Sept. 24.

For the New England Farmer.

LYNN HORTICULTURAL EXHIBITION.

FRIEND BROWN:—Lynn has become proverbial for its enterprise in the department of *Shoes*, of every grade and size. You may go east or west, north or south; from the *Atlantic* to the *Pacific*—*Florida* to the *Provinces*; and the name of *Lynn* is as familiar as household words; *Moll Pitcher*, and her mysterious acts, are famous in story and song; and who has not heard of "*High Rock*?" Still, there are other things in which *Lynn* is not behind the times; it is in her fine schools and beautiful gardens. The first, to raise plants of "*renown*," the other to please the eye, and gratify the sense and taste. Last evening, I had the extreme pleasure of attending one of those exhibitions of fruits and flowers, (so common at the present time,) at *Exchange Hall*. The fruit and flowers exhibited, were the productions of the gardens in this City, and under the direction of the Horticultural Society. Among the managers are the names of B. F. MUDGE, Ex-Mayor of this city, EBENEZER BROWN, Rev. Mr. SHACKFORD, OTIS JOHNSON, ROBERT BARTLETT, and H. A. BREED. H. A. Breed had 42 varieties of pears, and other choice fruit and flowers. E. Brown had 40 varieties of pears and 24 kinds of apples. Otis Johnson had 24 kinds of pears, and other choice fruit. Rev. Mr. Shackford had a good assortment of apples, pears, peaches, quinces, &c. Otis Johnson had a large variety of rare fruit. Robert Bartlett had some fine Seckel pears, the largest I have ever seen, also grapes, peaches, pears, flowers, &c. The whole affair was well got up, and spiced by the presence of a large number of ladies. This looks well for this young city—may prosperity attend her in the future.

Sept. 17th, 1853.

J. ROBINSON.

ENGLISH HORSES.—Horses in England are deteriorating; as a race, they are growing more delicate. At the military encampment at Cobham, the horses are carefully housed; whereas in former times, they could do very well in the open air. Modern English horses are also liable to have sore backs after a short march, and they are so weak in the legs that a number of such marches would soon produce lameness. The useful class of horses which formerly supplied the cavalry no longer exists. Breeders confine themselves to raising thorough-breds for the turf, to cart-horses, harness-horses, and hunters.

✂ In some parts of London, land is valued at the rate of two million dollars an acre. ♦

For the New England Farmer.

"OLD FIELDS."

MESSES. EDITORS:—Your correspondent R. B. H. in the *N. E. Farmer* 20th of August, expresses a correct idea of the land called "old fields" at the present day, and the bad treatment they have received from their owners. These old fields were considered the best land by the first settlers; they most readily yielded the important articles which constitute the "staff of life." If they could talk, it would be on this wise to the proprietors: "you have shown partiality; you have bestowed labor and manure on lands less deserving than we are, because they were obstinate and would not produce without; while we were ever obedient and freely yielded our utmost mite for your benefit, without manure or much labor; and now, because we cannot do more, you despise us and show your ingratitude by giving us a bad character and bestowing all your favors on hard, stony, cold lands you could not coax nor drive to produce a crop without manure and an abundance of labor; whereas, if you had treated us so and not slighted and starved us, but had bestowed upon us the same amount of manure and half the labor, we should have continued to reward you with as valuable, if not better crops, to this day, than your favorites, mud, clay and stones." I have had an opportunity to be acquainted with the use, and have seen the abuse of "old fields" or pine plains; it was my lot to be born on old fields; I received my nourishment from old fields, and a plenty of it too, and grew six feet high on old fields, and was educated on old fields, as any one would readily suppose by reading this.

The times have strangely altered since the war of 1812; corn and rye were dear and labor cheap, during a period of twenty years or more dating from 1792. Rye, if I remember aright, averaged as high as \$1.25 or \$1.50 a bushel from that time till 1820; it sold at \$2.50 in the time of the last war with England, and in the years 1836 and 1837 it sold for \$2 or more a bushel, so that skinning old fields in those days was a kind of necessary evil. At the above named periods farmers in New England were compelled to raise their own bread stuff; very few were able to eat wheat flour brought from the West, it being proportionably dear, which made the skinning of old fields a more excusable business than at the present day. When a man's labor was worth but 75 cents a day and rye worth \$1.25 or \$1.50 a bushel, there was an inducement to encourage the farmers to raise rye; but now labor is worth a dollar a day and rye but 83 cents, the farmer can sell his time at a higher price than he would get by continuing the process of skinning old fields. At the former period spoken of above, it was difficult for a farmer to find employment off from his own farm; and if he could it was more difficult to get cash pay; and he could do better at raising rye on old fields, even at 7 bushels to the acre, than doing nothing. Now he had better convert his old fields into sheep-pastures or woodlots than raise rye upon them at the high price of labor and the low price of rye. Summer fallowing was formerly practised in Middlesex, as now stated to be the case by R. B. H. in Hampshire County; but the practice has been abandoned for years by many of the rye producers here, because frequent plowings they consider injures light soils

by exposing them so much to the weather that the fertilizing principles in the soil are dissipated.

The most successful method of raising rye on old fields that I have witnessed, and least injurious to the soil, is to plow the ground well in June when the full coat of grass and weeds have attained a good growth, then not disturb it again till the middle or last of August, then sow from 16 to 24 quarts of rye to the acre, which is a plenty for old fields, and a bushel of red-top seed; then harrow with an iron harrow well both ways, and smooth off with the bush harrow. The March following sow any quantity of clover seed on top of a light snow. It is an object of importance on such land to start a coat of some kind of herbage which goes far towards restoring it to a state of fertility; the naked soil exposed to the drying winds and scorching rays of the sun will not improve much in value. On this plan I have raised 15 or more bushels of good rye to the acre on old fields. These old fields ought to rest more than three years between cropping, every seventh year is often enough to skin them unless manure can be applied. I cannot recommend the above system of farming, where a better one can be adopted. I was told yesterday by a man from Connecticut, that a farmer there bought a large tract of old, worn out fields of the worst description for five dollars an acre, and by sowing seed and plowing in herbage, he restored it to such a state of fertility that it produced fine crops and was worth fifty dollars an acre; this man was an eye-witness to what he related to me. It strikes me that such a course of enriching land must be more economical than buying manure at the customary price. While the farmer is plowing in the green crops, his land is rising in value probably to the amount of what he would derive from the crops on the same land manured in the same amount of time. I think old fields may be much improved without manure by a judicious system of management; plowing in any of the natural herbage of the soil is better than nothing.

All kinds of grass and weeds, as well as clover and buckwheat, derive a great part of their substance from the nutritive gases of the air, which plowed in at a proper time, will fertilize the soil. I believe that old fields in different locations of the State require different fertilizing materials. Gypsum and lime seem to be useless in this neighborhood, but in some other sections of the State the best results have followed their use. I have found mud, ashes and coal dust excellent applications to my light land for the production of corn and rye. I concur with R. B. H. in his opinion in regard to rotation and making a deep soil by gradually deeper plowings and exposing earth to the sun that never felt its influences before. These old fields have experienced the blighting curse of thoughtless man's cupidity, and restoring them to fertility again is all up-hill work, but science can accomplish it, and at the same time remunerate the skillful cultivator for his labor. Old fields so much despised will compare with a benevolent class of people who give away all they have, and for a compensation, are rewarded with a privilege and the honor of a seat in the poor-house. If they had been so obstinate that they would not have produced without manure at first, they, some of them, would have ranked with our best lands at the present time.

Every observing farmer who has seen much of the world has seen the advantages and disadvantages of the different kinds of soils; he has seen a great variety which are denominated old fields; some loamy and fine, some coarse and gravelly; some a loose quicksand to a great depth, which I should advise no man to cultivate where land is cheap; the expense of carting on clay and other materials to enrich and restore this leachy kind of land would be more than it would be worth when done. Let such land be planted with pine trees. On the other hand he has seen a great variety of the heavy, strong soils, some fine and productive, some coarse, stony and cold, some with too much clay; I have seen hundreds of acres of handsomely located land in the county of Essex covered with kill-lamb, forming a complete contrast with the lenchy quicksand, and like self-righteousness, the less a man has of it the better he is off, unless he can reclaim it by trenching, or with the subsoil plow; manure has done but little good on it, where I have seen it applied.

SILAS BROWN.

Wilmington, August, 1853.

For the New England Farmer.

BIRDS OF NEW ENGLAND.

THEIR PAST AND PRESENT HISTORY. . . . No. 6.

BY S. P. FOWLER.

THE SWALLOW TRIBE.

We are now about to describe a class of birds, on many accounts, interesting to the cultivators of the soil. They are all insectivorous, never disturbing the crops of the farmer, or the fruit of the horticulturist. But perhaps we should make one exception to the general good character of the swallow tribe, when we come to speak of the Purple Martin. They are in general, social, intelligent, volatile, active birds, and being fond of the society of men, they invariably, with one exception leave the forests and solitary places, and seek his presence and protection, whether it be found near the wigwam of the Indian, the log cabin of the Squatter, the quarters of the slave, or the cultivated gardens and fields of the farmer or horticulturist.

There are eight species of the swallow tribe found in the United States, six of whom, and perhaps seven, are to be seen not unfrequently, on one farm or in one village in Massachusetts. These eight are the Purple Martin, Barn Swallow, Cliff Swallow, White Bellied Swallow, Bank Swallow, Chimney Swallow, Rough-Winged Swallow, and Violet Green Swallow.

Many opinions have been expressed, and notions entertained, in regard to the first appearance of the swallow tribe in this country. And we have been frequently asked the question, did these birds visit the several parts of our Union, as they do at present, before the settlement of the country by Europeans? And particularly was the Purple Martin unknown in New England previous to the Revolution. In answer to these questions, we would say, we have evidence that the Barn and Chimney Swallows were known from the first settlement of New England. Josselyn described these birds as early as 1638.

At this early period, the Barn Swallow built its nest under the shelving ledges and beetling cliffs, around our shores. At Nahant, in one of

the lofty cliffs, there is a curious recess, called the Swallow's Cave. Great numbers of swallows inhabit this cavern in the summer season, and build their nests in the upper part.

The Chimney Swallow attached its nest to the inside of hollow buttonwoods, and other trees.—At the present day, in the fir countries at the North, where there are no human habitations to invite the swallow, they build their nests in the lime stone caves. The Purple Martin was known to inhabit the Carolinas more than one hundred and twenty years since. Mr. Catesby, in 1732, published his *Natural History of Carolina, Florida, &c.*, where he describes ninety-four species of our birds, and enumerates two *Hirundo*—to wit, the Purple Martin and the Barn Swallow. It would seem, by an examination of the very interesting correspondence which took place in 1759, between John Bartram and Peter Collinson, upon the subject of our *Natural History*, that Mr. Bartram discovered in Pennsylvania four species of swallows, namely the Purple Martin, Barn Swallow, Bank Swallow and Chimney Swallow.

William Bartram, the fourth son of John Bartram, one of our early and most distinguished naturalists, the friend and patron of Alexander Wilson, published in 1782 what has been considered the most complete and correct list of American birds, prior to the work of Wilson, in which he has four species of swallows, viz.: The Barn Swallow, Purple Martin, Bank Swallow and Chimney Swallow. It will be seen that up to the appearance of the American Ornithology by Wilson, in 1808, no notice had been taken by our ornithologists of the White Bellied Swallow, it being probably confounded with the Bank Swallow, and by some European writers, with the English Martin. So far as our observation extends, we should think the White-Bellied Swallow in Massachusetts was much less common than the other species, which may be another reason why it was not earlier noticed by ornithologists.

We have now traced the history of the swallow tribe in this country to the time of Wilson, when there were five species of these birds. It was in the spring of 1815, when a new and very distinct species of swallow was just seen by Audubon, at Henderson, on the banks of the Ohio River. He drew up a description of it at the time, and named it the Republican Swallow. This was probably their first appearance in our Union. In 1817, they made their appearance at Whitehall, near Lake Champlain. In 1818, they began to build at Crawford's, at the White Mountains in New Hampshire. In 1827, we saw a large number of these swallows building their nest under the eaves of a barn, situated near the entrance of the Penobscot River, in Maine. In 1820, they made their appearance on the banks of Point Lake, in lat. 65° north, as noticed by Sir John Franklin. We first noticed them in Danvers, in the spring of 1839. The question has been frequently asked, where did the Cliff Swallows come from? In answer, we would say, they probably came from the westerly side of the Rocky Mountains.

Those seen by Sir John Franklin's party in June, 1825, along the whole course of the Slave and Mackenzie Rivers, came undoubtedly from the opposite side of the Rocky Mountains, and not from the Atlantic coasts, as it is found that those mountain ranges do not present a barrier to the

migratory feathered tribes. We may suppose that the Cliff Swallows enter the northern part of the union from this quarter. They have been for some years generally known in Nova Scotia and in Labrador—hence, by some persons, they have been called the Labrador Swallow.

The discovery of the seventh species of our swallows was made on the 20th of October, in the year 1819, by Mr. Audubon, as he was walking along the shores of a forest-margined lake, a few miles from Buyou Sara, in pursuit of some Ibises. But very little is known as yet of this bird by ornithologists. Mr. Audubon has named it the Rough-Winged Swallow, and has given us a colored plate of it in his *Birds of America*. They so much resemble the Bank Swallow, that a careless observer would not notice the distinction.—Mr. Audubon supposes, that its most habitual residence will be found to be in the valleys of the Columbia River. The eighth and last species of our swallows whose first appearance we shall notice, is a most beautiful little bird, judging from the figure given it by Mr. Audubon, for as yet we have not seen a specimen. It is called by him the Violet Green Swallow, and he speaks of its first discovery as follows:—

"Of this, the most beautiful swallow hitherto discovered within the limits of the United States, the following account has been transmitted to me, by my friend Mr. Nuttall.

"We first met with this elegant species, within the table-land of the Rocky Mountains, and they were particularly abundant around our encampment on Harris Fork, a branch of the Colorado of the West." In this account of the first notice of this swallow we have no dates but we find in an exploring tour beyond the Rocky Mountains, performed by the Rev. Samuel Parker, in the year 1836, when in the Oregon Territory, he made this record in his journal. "Swallows made their appearance on the 12th of March; and among them a new species, characterized by the plumage of their head and back, being a most beautiful changeable green, with other parts purple and white."

This no doubt was the little beautiful Violet Green Swallow, that arrested the attention of the missionary. How much earlier, if any, this new species of swallow was seen, we do not know.—It affords us pleasure to believe that this fine bird, whose home is at present beyond the Rocky Mountains, it having never as yet visited its eastern slope, will, at some period more or less remote, visit and take up its residence with us, who live on the Atlantic coast. This belief we entertain, from the well known and constant habit of the swallow tribe of leaving the accommodations and shelter afforded by nature in the wilderness, and seeking those better ones furnished by man. When Fort Franklin was erected on the shores of Great Bear Lake, in the autumn of 1825, Dr. Richardson says, they found many nests of swallows in the ruins of a house, that had been abandoned for more than ten years. In this case, these birds left the limestone caves, where they had been accustomed to breed, for the houses erected by the fur company. One other reason for believing that we shall yet see in Massachusetts the Violet Green Swallow, arises from the fact of their usually associating with the Cliff Swallows, and frequently occupying their deserted nests. Under these circumstances, they would be likely to accompany

them to the Eastern States in their migrations.—We had intended to give a short description of the several species, composing the swallow tribe, together with some facts respecting their habits and particularly their migrations, as we have observed them for many years; but we notice that our communication already exceeds your limits. With your own desire, and that of some of your readers, to know more of the history of our swallows, and with your permission, I will conclude what I have to communicate upon the character and habits of our *Hirundos* in my next article.

S. P. F.

Danversport, Sept. 3, 1853.

ROCKINGHAM CATTLE SHOW AND FAIR.

For some twenty years, no Cattle Show has been held in Rockingham County, the old Agricultural Society having died about so long ago. The new society, organized within a year, appointed for its first exhibition, Thursday, the 15th of September, at Exeter; liberal preparations were made for the occasion, although there were many, we understand, who echoed the ill-omened cry, that it could not succeed.

The day came, and with it a storm from the South, such as is only introduced on occasions extraordinary. It seemed as if the windows of Heaven were opened anew, as in the days of the first navigator of whom the good book speaks. As one gentleman said, it was a storm of *some character*, and everybody understood that it meant very decidedly, that no Cattle Show should be held on that day. Forty cattle had already arrived, and a small supply of articles for the hall exhibition.

After mutually criticising each other's long faces, and wondering what good designs of Providence could lie concealed under so manifestly a wet blanket, the officers of the society decided to adjourn the show till Friday, hoping better times, though sorely distrustful.

Friday came, bringing a fair west wind, and clear sunlight over the green and beautiful lawns and trees of old Exeter, and it was manifest at once, that the power which guides the storm had not visited the enterprise in anger.

At about seven o'clock the noise of preparation commenced; Marshals on prancing steeds were seen hurrying through the streets, the lowing of cattle, the bleating of sheep, the rattle of wheels sent up a confused sound. At eight, the Brentwood band, in an open carriage drawn by four elegant horses, made its appearance, and the performances of the day began.

THE HAMPTON-FALLS TEAM.

The grand entry of the Hampton-Falls delegation of members, with ladies, was a beautiful opening of the display. The band led by the marshal, went out to meet them a mile from the village, and escorted them into the town. Twenty yoke of

handsome oxen, with their horns tastefully dressed in blue and yellow streamers of ribbon, were attached to a car, mounted upon four wheels, and containing twenty-seven young ladies of Hampton Falls. The car was roofed over with green corn leaves, for a screen from the sun, and carpeted and cushioned like a church. The outside was beautifully decorated with evergreens and bouquets of flowers. Indeed, no part of the wood even of the wheels could be seen, but it was an elegant combination of the brilliant colors of Autumn flowers, with the fresh green of the forest trees and vines. Upon the sides, curiously formed in large letters, with vegetables of all kinds, was an inscription of the name of the town. Snugly seated among the fair occupants of the car, were seen the President of the Society, and Orator of the day, who had gone out to pay their early respects. On the square, teams from other towns were added to the procession, to the number, in all, of some seventy yoke of oxen, and at nine, by the music of the band, and with occasional songs by the ladies, amid shouts and cheers of the multitude already assembled, the procession moved on to the cattle grounds by the depot. Coaches were then furnished by the Society to the ladies, who were driven about the grounds to view the animals, and then escorted by the marshals to the exhibition hall. All honor to the ladies of Hampton-Falls, who have set an example to their sisters through the county, of incalculable value to this new Agricultural Society.

THE CATTLE PENS.

Time and space cannot now be spared to give details. About one hundred and twenty yoke of oxen were upon the field, and the pens contained, of horned cattle, about one hundred head. Gentlemen from our own State familiar with such scenes declared that so fine a display of working oxen they had rarely witnessed.

After organizing the various committees, the word was given to proceed to witness the

FLOWING MATCH.

But seven teams were entered for plowing. Although the knowing ones could well enough see, that no great affair could be made of this part of the show, yet nothing could exceed the interest manifested by the spectators, to most of whom the spectacle was new. The plowing was tolerably well done, but many such trials are wanting, to bring the farmers of old Rockingham up to their proper mark in this department.

THE PROCESSION AND ADDRESS.

At the close of the plowing match, a procession was formed, of the officers and members of the society, and invited guests, in Pine Street, and marched to the church. The Hampton Falls car with its twenty yoke of oxen bringing up the rear.

The wall pews of the house were filled with ladies, and the members of the society filled the rest, standing in the aisles in crowds, after the seats were all taken.

A voluntary was played by the band, a beautiful selection of scripture was read by the Rev. Mr. Mann, who in language appropriate and eloquent, also made a prayer, and a hymn was sung by the choir. The address, falling from our own lips, forbids our saying anything more about it than that it was attentively listened to.

THE EXHIBITION HALL.

The ancient and dusty old Town Hall was elegantly decorated, with evergreen and oak leaves, by the young ladies of Exeter, whose presence at the tables, added not a little to the attractions of the scene. Tables more than two hundred feet in length, in all, were arranged through the room, completely covered with fruit and flowers, and articles of needlework, and embodiments of a thousand curious fancies, while the benches were loaded with mammoth vegetables, and the walls adorned with pictures and embroidery. The show of fruit was a surprise to all. Baskets of peaches and pears were as fine as can any where be produced.

To give some idea of the number of persons present on the occasion, we have more reliable data, than mere real estimates, which ranged all the way, from five to ten thousand. We heard an old gentleman say, that he had lived in Exeter sixty years, and that never before had he seen so many people in the town at one time. The exhibition at the Hall was free to members of the Society, more than four hundred, in number, and to all members of their families, and all who claimed to be such, yet more than 2,000 persons paid an admission fee at the door! The Committee of managers at the Hall estimated that more than one-half entered without payment.

THE AWARD OF PREMIUMS.

At four o'clock, the music called together in front of the Squamscot House a crowd, such as is seldom anywhere witnessed.

The President, Mr. French, from one of the porticos, read the reports of the various committees while "a sea of upturned faces" anxiously awaited the decisions.

He also introduced to the meeting, several gentlemen from abroad, who made short addresses. Col. Newell, President of the Essex Society, a veteran in the cause of Agriculture, was among them. He complimented, in the highest terms, the exhibitions of cattle and of fruit, pronouncing them equal to any he had ever seen. Remarks were also made by Mr. FARNUM, of Boston.

A spectacle was here presented, such as we have never witnessed at any show before. The President, with several invited guests, stood upon the balcony of the porch, while the multitude be-

low amounted to between 3,000 and 4,000 persons; and there they remained, listening to remarks from the strangers who addressed them, and the declaration of the awards, from 4 till half past 5 o'clock. We have rarely witnessed a more imposing and gratifying sight.

At about six o'clock, the crowd dispersed, and most of the people from abroad were supposed to have left town.

The evening, however, brought a crowd of people again to the Hall, and the committee, at a late hour, was obliged to insist upon closing the doors, and the first annual exhibition of the Rockingham Fair.

The whole affair has been highly creditable to our enterprising neighbors. There can no longer be any doubters as to the success of the experiment. We saw, of course, some errors which their sagacity will correct as they proceed. If so lusty and strong in their youth, how will they excel us in their manhood! Massachusetts must look out for her laurels!

For the New England Farmer.

A NEW HELP FOR THE FARMER.

ELEMENTS OF AGRICULTURAL CHEMISTRY AND GEOLOGY. By JAMES F. W. JOHNSTON, M. A. F. R. S. E., &c., with a Preface and Index. By SIMON BROWN, Editor of the New England Farmer. New York: C. M. Saxton.

We are glad to see a new edition of this most excellent work. It is a seasonable publication. Both the publisher and the editor have done a good thing for the rising generation of farmers, and we trust it will prove a good thing for themselves. The preface contains several judicious and sensible remarks, and, like all the writings of Mr. Brown, is marked by careful observation and practical good sense. The index appears to be prepared with much care, and adds materially to the value of the book. This is true of every good index; and, indeed, we consider no scientific work complete without an index. We wish authors and publishers would lay this remark to heart and reduce it to practice. Many scientific books are chiefly valuable as books of reference. But who can refer to a book without an index! The labor of turning over a score of pages, or reading a whole chapter to find a single remark or a fact which a writer wishes to use, is often more than the remark or fact is worth, and is any thing but agreeable.

There is one observation in the preface upon which we beg leave to offer a remark. The writer speaks of instructions upon the science of agriculture as *necessarily abstruse*. We take the liberty to dissent from this idea. It is indeed true that they are often abstruse, but we do not believe they are *necessarily* so. Chemistry had its origin in Alchemy. It was long in the hands of astrologers and pseudo-philosophers, who were searching for the elixir of life and the philosopher's stone. Its terms were borrowed from the Greek and Arabic, and it was clothed in the language of mysticism. The days of Astrology and Alchemy passed away with Paracelsus and his school, and Chemistry passed with them from the laboratories of the monks into the hands of the physicians,

who did little to divest it of the mystery which enveloped it until the time of Lavoisier and his illustrious coadjutors, who gathered up its scattered elements and reduced it to the true form of a science, and gave it a nomenclature founded upon a perfectly simple and most beautiful idea, viz: that every term describing a chemical substance, should, at the same time, designate its composition if a compound body, and its most important use if a simple body. For example, oxygen is derived from oxus, signifying acid, and gigno signifying to generate; by which we are taught that oxygen is the source or generator of all acids. Hydrogen comes from hudor, water and the same word gigno, indicating that hydrogen is the principal element in water. Of compound bodies we will take sulphurate of lime as an example. This term teaches that the body which it designates is composed of sulphuric acid and lime, mixed together in proportions just sufficient to neutralize each other. Muriate of soda indicates that the substance thus designated is composed of muriatic acid and soda, combined in the same proportions. So with all the terms used in Chemistry. Give the chemist the name of a substance, and he will tell you its composition; or give him the composition of a body, and he will give you its name. A most beautiful simplicity runs through the whole system.

The number of elementary bodies with which the chemist has to do, is limited to between fifty and sixty. The terms which he uses are compounded of the few elementary terms which describe these elementary bodies. For example, sulphuric acid, which shows that this acid is composed of sulphur and oxygen, the common parents of all acids; carbonic acid, consisting of carbon and oxygen. Nothing can be more simple than this whole system. The great difficulty in understanding chemical instruction consists in the want of a proper explanation of the terms, or rather in the want of a proper explanation of the principles upon which the terms are constructed. Where these principles are fully comprehended, and any man of common intelligence may comprehend them in an hour, the teachings of the chemist become at once intelligible and interesting. The abstruseness, the mystery that hangs over the subject like a dense fog, is dissipated by the clear sunlight of simple truth. It is true that many subjects that present themselves to the chemist are exceedingly complex, but patient and careful analysis can reduce them to their constituent elements, and the patience of the chemist is rewarded by the discovery of new and beautiful combinations of simple elements. Now there is nothing mysterious, nothing magical, nothing abstruse in all this. And we trust the time is not far distant when all the children—in our high schools at least—when all our young men and young women will be able to listen to scientific instruction upon so much of chemistry as relates to agriculture and the common arts of life, and to read books upon these subjects with no more difficulty in understanding them than they have in understanding household words.

The publication of this volume will contribute something towards this result. It is simple in its arrangement, being generally accurate in its statements, and more easily comprehended by the general reader than most books upon the same subject. Its analytical tables add much to its

value. Many of the tables in agricultural works are any thing but reliable. They have been copied from now and then, and anon have been stereotyped, to the manifest injury of science. No intelligent agriculturist who intends to keep up with the progress of knowledge will fail to place this book upon his table.

JOS. RETNOLDS.

Concord, Sept., 1853.

THE CLIMBING CRICKET.

It is possible that we have done injustice to the bees, for whose general character and industrious habits we have great respect, in accusing them of being the primal cause of the decay of the peaches this season, an evil that is loudly complained of in this vicinity. That the bees are ~~then~~ under very suspicious circumstances is a notorious fact—actually engaged luxuriating on the saccharine juice exuding from the crimson cheek of a peach, which, on examination, will show signs of rapid decay.

But some circumstances induce us to believe that the bee is not the first offender, but that it treads in the steps of a less worthy pioneer, which clears away all obstacles, perforates the external covering of the peach, and lays open to view its honeyed treasures.

This piratical insect we believe to be a species of cricket, long-bodied, and resembling a grasshopper, which may be seen about and among peach trees, and which can boast of a proboscis, armed with a piercer that is well calculated to do the mischief complained of. Crickets of all kinds, it is well known, are exceedingly fond of ripe peaches and pears, and this particular species, known as the *climbing cricket*, has powers of locomotion and aspiring tastes, that carries it among the branches of peach trees, and it has actually been seen and captured while revelling in the sweets extracted from the sunny cheek of a peach. Dr. Harris, in his "Insects of Massachusetts," gives the following description of this insect; and although he does not accuse him of eating the fruit, yet the fact of his boring into peach trees looks somewhat suspicious:—*Boston Journal*.

"Of three species which inhabits the United States, one only is found in Massachusetts. It is the *Ecanthus niveus*, or white climbing cricket. The male is ivory-white, with the upper side of the first joint of the antennæ, and the head between the eyes, of an ochre-yellow color; there is a minute black dot on the under sides of the first and second joints of the antennæ; and, in some individuals, the extremities of the feet, and the under sides of the hindmost thighs, are ochre-yellow. The body is about half an inch long, exclusive of the wing-covers. The female is usually rather longer, but the wing-covers are much narrower than those of the male, and there is a great diversity of coloring in this sex; the body being sometimes almost white, or pale greenish yellow, or dusky and blackish beneath. There are three dusky stripes on the head and thorax, and the legs, antennæ and piercer, are more or less dusky or blackish. The wing-covers and wings are yellowish white, sometimes with a tinge of green, and the wings are rather longer than the covers. Some of these insects have been sent to me by a gentleman who found them piercing and laying eggs in the branches of a peach-tree. Another correspondent, who is interested in the tobacco culture

in Connecticut, informed me that they injured the plant by eating holes in the leaves."

For the New England Farmer.

SMITH'S ORLEANS PLUM.

MR. EDITOR:—I was much gratified to see the cut, and read the remarks in your last number upon Smith's Orleans Plum; but I think that the extract from Downing does not do entire justice to this excellent plum. With me, for fruitfulness, profit and general interest, it is before all other plums. It is a wonderful bearer; bears good crops every year, and every other year immense crops. The tree is a very hardy and strong grower; troubled much less with "black wart" than other kinds, while the fruit with me entirely escapes the ravages of the curculio.

The fruit is quite large; skin of an elegant pink purple color, sometimes beautifully mottled; flesh of an orange color and agreeable taste; ripens gradually (with me) from the 10th to the last of August; and besides its good eating qualities, is, when picked a little before ripe, one of the best of preserving plums.

I have a tree in my garden which I purchased four years ago for 50 cents. I brought it home while in blossom, and set it out with care. The same season it produced fruit enough to pay for itself. The second year I sold twelve dollars worth, besides consuming many at home. The third year it bore well, but the present season it is a sight to behold, literally studded from stock to stem, so that it is almost impossible to touch the bark of a single limb with the end of your finger without coming in contact with the fruit. I venture to say, that upon most of the branches, no larger than the one represented in your last paper, the fruit averages twelve plums. One branch (although propped up,) broke off three feet from the end no larger than your thumb, from which I picked six quarts. This plum finds a ready sale in the market, selling from twelve and a half to seventeen cents per quart; and for easy cultivation and certain crops, I would recommend it above most other varieties.

N. A. RICHARDSON.

Winchester, Sept. 12th, 1853.

P. S. I cultivate upwards of twenty kinds of plums, and in some future number I will give you my brief experience upon their merits, together with my manner of treatment, by which I get a good crop from most kinds every year.

N. A. R.

REMARKS.—We shall be glad to receive the articles you propose to send.

CURIOUS DEVICE IN GRAFTING.—The gardeners in Italy sell plants of jasmines, roses, honeysuckles, &c., all growing together from a stock of orange, myrtle, or pomegranate, on which they say they are grafted. But this is a mere deception; the fact being, that the stock has its centre bored out, so as to be made hollow, through which the stems of jasmines and other flexible plants are easily made to pass, their roots intermingling with those of the stock. After growing for a time, the increase in the diameter of the stems, thus enclosed, forces them together, and they assume all the appearance of being united to one common stem.

ATKINS' AUTOMATON SELF-RAKING REAPER.

This machine was tested last fall, at Geneva, by the New York State Agricultural Society. We know nothing of it from personal experience, or from any examination of our own; but as we are desirous of keeping our readers informed of the progress of agricultural machinery, we lay before them an engraving of the Reaper, with such remarks upon it as we find at hand.

The editor of the *Albany Cultivator* says, "The self-raking machine is the invention of J. ATKINS, of Chicago, a person of great ingenuity, as this contrivance fully testifies. The rake sweeps the bed where the fallen grain is deposited, presses it against a toothed plate, and both, holding firmly the bundle of grain thus collected, swing round the quarter of a circle off behind, when they open wide, and drop their contents in a neat bunch upon the ground. All these motions are accomplished by a very singular piece of mechanism; and they seem so nearly the immediate result of intelligence, that this machine was generally called by the name of the *Automaton Reaper*. Its invention is quite recent, and it had scarcely ever been used before; and hence, owing to an accident, it did not succeed the first day of its trial. It was, however, repaired, a temporary reel attached, and tried again on the 23rd with entire satisfaction, proving decidedly the best self-raker on the ground."

"NEW AMERICAN REAPING MACHINE.—An American millwright, named Atkins, residing at Chicago, has recently invented a very remarkable piece of mechanism for the purpose of making the reaping machine, after cutting corn, deliver it in bundles ready for the binder. This was the great de-

sideratum of the machine as first brought over to this country and shown in Hyde Park; nor have our implement makers, though they introduced some important improvements, succeeded in supplying the want thus indicated. Atkins', who, it appears, has been bedridden for ten years, designed an automaton arm, terminating in a rake, which, as the reaper moves along, regularly sweeps the cut corn in sheaves off the board on which it has been deposited, drops each parcel at the side by a rotary movement, and then, extending itself, returns to its work again. Whether the invention will stand the test of experiment in the field [in England] remains of course to be seen; but some of our most eminent agriculturists regard it with great interest, and appear to entertain very favorable expectations of its performance. The mechanical arrangements by which the automaton action is secured are remarkable both for their novelty and simplicity; and those who wish to see them should go to the Polytechnic Institution, Regent Street, where the new reaper is exhibited by Mr. J. S. Wright, of Chicago, Illinois. This machine, which is built on ——— model, also contains a clever modification of the cutter, which, it is said, entirely overcomes the tendency to clog in damp weather or on unfavorable ground."—*London Times*, Feb. 12th, 1853.

THE MACHINE AS A MOWER.

Mr. ATKINS having planned his machine to reap and rake, has had doubts about its proving to be a good mower, and its construction is not such that in rough land it will operate equally well with one arranged only to mow. Till to-day I have been unable to try it on grass. Its success was such on the rough prairie, a few miles from the city, that Mr. JAMES TOWNSEND, of Pontiac, Michigan, who came here expressly to get a machine that would be sure to mow, and who witnessed the whole trial, bought and paid for one in advance \$160, with no warranty as to its mowing qualities, saying as

would warrant it to do that, if I would warrant it as a reaper and raker, which I do on fair terms. On land pretty well prepared I believe it will mow very well, but am unwilling to warrant it in this respect.

J. S. WRIGHT.

"*Prairie Farmer*" Warehouse.

Chicago, June 21, 1853.

CURLED LEAF IN THE PEACH.

THIS disease, if so we may call it, has been, for four or five years past, assuming a more and more serious aspect, so that cultivators around us here in Western N. Y., begin to say that if it goes on as it threatens to do, and no remedy be discovered, we shall soon be compelled to abandon peach culture entirely. This would certainly be a great calamity, and it becomes every one who wishes to escape, to investigate carefully the nature of the disease, with a view to the discovery of the real cause. We have been looking anxiously for some new light on the subject among the journals of the day, and find the following in a recent number of the *Country Gentleman*.

"The curl in the leaf of the peach, which is generally supposed to have had a very unfavorable influence on the young crop, has given rise to much speculation as to its immediate cause, and cold weather, aphides, fungus, or mildew, and diseased sap, have been variously assigned as reasons. The cold weather theory will not always apply, as the disease sometimes appears after a continued succession of warm days, and the first opening of the young leaves shows the symptoms when they have never been exposed to a cool night. Again, the disease has often made its appearance when no aphides could at any time be detected with the most powerful achromatic glass; and newly opening leaves, exposed only a few hours to the fresh air, and on which no insect had ever set foot, have shown incipient, but unmistakable indications. The explanation by 'diseased sap,' is too general and indefinite — the fungus theory has more appearance of plausibility, but needs investigation and proof — and if correct, the fungus must be of internal growth, as the smooth and shining epidermis of the leaf is quite unbroken when the curl first appears in the cellular tissue.

But whatever may be the cause, the best remedy, so far as discovered, is vigorous growth. We have observed trees standing in the corner of a hog yard, where they were copiously supplied with manure, and as a consequence making a rapid growth, covered with a deep green foliage, with scarcely a vestige of the curl; and a row of peach trees which had been very freely shortened in the past winter, by cutting off branches in some cases an inch in diameter, have sent out strong new shoots, almost wholly free from the disease, and the trees are well loaded with young fruit."

Now, our opinion, formed several years ago, and strengthened by later experience, is that the curl is produced by changes of temperature too great for the delicate constitution of the peach. It is a tree that vegetates early, and being usually and from necessity planted in a light soil, its earliness is hastened, and the sap gets into active circulation, and young leaves are put forth long before the weather in our northern climate becomes steadily warm. We all know how common it is to have warm genial spring weather about the opening of

the buds, when a sudden change comes, and we have probably a week or two of cold, rainy weather, with slight frosts probably, with cold dry winds. This at once arrests the development of the young shoots and leaves; the sap becomes stagnant and diseased; the bark is ruptured, and gum oozes out all over the younger parts; the leaves, whether in an embryo condition, rolled up in the bud, or half or wholly expanded, become swollen and diseased; then mildew attacks them, as it is always ready to reign upon sickly or feeble vegetation, and with this aphides and other insects; hence the opinions that mildew or insects were the cause of the disease.

1849, we think, was the first year this disease appeared in Western New York, in a serious form. That spring was cold and changeable. 1850 was similar, and the curl was worse than before, and so has continued since. One strong argument, at least so we regard it, in favor of this view, is the fact that if we have fine weather at the opening of the peach buds, we have very little curl, and that immediately after a change to cold the curl appears, and its severity is always in proportion to the intensity and continuance of the cold. Then again, as soon as the weather becomes warm and steady, the diseased leaves drop and new healthy leaves appear, and the disease is no more seen that season, not a symptom of it. Besides, some varieties are much less affected by it than others. We have a very hardy French variety, *Pêche de Vignes*, that scarcely ever shows a curl in the worst seasons. We have a short row of six trees that have come almost hourly under our observation; the varieties are the *Snow*, *Old Mixon Free*, *La Grande*, *Crawford's Early*, *Haines' Early*, and *Coolidge's Favorite*. These were all planted at one time, of the same age, and in the same soil, and have been treated exactly alike, but the *Crawford's Early* and *Coolidge's Favorite* have suffered so much less than the others from the curl, that the trees are nearly twice as large, and both have now a good crop of fruit on, while the others have few or none. In going through an extensive orchard we might find many instances of this kind.

In addition to this, we find that trees in sheltered gardens suffer less than those exposed; and under glass, there is no such thing as curl. Are not all these facts sufficient to warrant the opinion we have expressed?

The article we have quoted says, "the disease sometimes occurs after a succession of warm days." We admit this, but it never has appeared to our knowledge after warm days without the intervention of cold nights. Has any one seen it appear in warm weather, say in June, July, or subsequent months?

It says, too, that "the first opening of the young leaves show the symptoms when they have never been exposed even to a cold night." We grant this, but as we have said, the sudden and violent check given to the tree affects every part, and the leaves even while rolled up in the bud. Neither can we agree with the opinion that "vigorous growth is the best remedy," for we have seen some of the most vigorous growing trees suffer most seriously. We regard *well ripened wood* as more important than vigorous growth, but we would combine these if we could. Were not the trees quoted as examples benefited by some kind of protection? To avoid in some degree the ef-

fects of the malady we can now only suggest the selection of *hardy* varieties and planting in situations somewhat protected from the cold west and north-west winds. Will peach growers who have had opportunity for extensive observation give us the benefit of their experience on this subject? If we have drawn erroneous conclusions from our own observations we shall be thankful to any one who will set us right.—*Genesee Farmer*.

DESTRUCTION OF WOOD.

An aged and venerable man remarked to us recently, that in a single neighborhood, and in the comparatively brief period of five years, not less than two hundred acres of forest land, all of it densely wooded, had been entirely denuded of its original growth! At this rate he is of opinion that in a few years we shall be compelled to pay roundly for every thing we obtain in the shape of wood, whether deflagable or not. There is nothing more fatal to a country than the destruction of its wood, for with the growth perishes, in a very great measure, the essential principles of vegetable fertility. Mr. THAUN, a few years since, in a speech before the French House of Assembly relative to this subject, remarked that war, famine, and pestilence, are less terrible afflictions than the waste of wood. France, said he, will disappear as many flourishing countries already have, if she do not follow the example of Cyrus, who planted forests in Asia-Minor. It is only the abundance of forests and water which enables China to support her hundred millions of population. In that empire there are more trees planted than destroyed. Spain, so highly cultivated, and so densely crowded with inhabitants in the days of the Roman Empire, and in the times of the Moors, and since those of Charles the Fifth, owes her present dreary and desolate appearance to the waste of her woods. The same is the case with most of the countries of Asia, and the same will no doubt, at no distant day, be the case in this country, if not prevented by the adoption of a policy the reverse of that which we are now pursuing. It is indeed a painful and revolting contemplation to witness the wanton destruction of our noble forests, and the denuded hills and bleak mountains once clothed in robes of living verdure. In Scotland, many of the landed proprietors have for some years been engaged in restoring the forests which had been swept away in previous ages. The old Duke of Arrol planted on his estate in Perthshire, many hundred thousands of mountain birches. The patriotic efforts of Sir WALTER SCOTT, in restoring beauty to the bleak wastes and barren hill sides in the vicinity of Abbotsford, deserves all the commendation which literature can bestow. Such examples, are like apples of gold in pictures of silver; they have an abiding and perennial effect, operating as a centre of action from which none but the most desirable influences can flow forth. But in

this country the abundance of timber appears to have engendered the idea of its worthlessness.—Men do not reflect that the rapidly increasing demand for it is annually and rapidly lessening the supply, and that the increase, by growth, is by no means so great as the consumption. We presume there is not a plantation of wood-land in New England, where there should have been thousands of acres. There is much land that can be devoted to no other *profitable* use, and the expense of planting is too insignificant to be urged as an objection by any one. We shall refer to this subject again.

SPEED THE PLOW.

BY CARLOS D. STEWART.

Speed the plow, and turn the furrow,
Scatter wide the yellow grain;
Soon it will, with golden harvests,
Bring an hundred fold again.
Who so happy as the plowman?
Up and singing with the sun—
Happy, trudging in the furrow,
Happy, when the day is done.

Speed the plow, and turn the furrow,
Sow the seed, and reap the land;
Envy not the king his sceptre,
Better fills the plowman's hand.
None so happy as the plowman,
None on earth so true a lord;
Reaper of the golden harvests,
Planter of the golden sward!

For the New England Farmer.

METEOROLOGICAL, &C.

MR. EDITOR:—For seven days in succession, ending the 14th of this month, the heat of the atmosphere has been greater than usual. For four days, by Farenheit's thermometer, it ranged from 84° to 89 and three days from 90 to 99. In some locations it rose in the shade as high as 100, 101, 102, 103, and even 104, between one o'clock and two P. M. On the 13th, there were showers and thunder heard in almost every direction from this place; but not a drop of rain fell here till five o'clock P. M., and not much then, yet the lightning played around and struck the earth in the East, West, North, and South, within half a mile of where I was, amid almost clear sky. On looking up to discover where those bright and dangerous electrical missiles came from, a point of a cumulus cloud was seen nearly to project directly over head, but not quite, whose base lay over Plymouth county, some fifteen miles distant. The lightning appeared to shoot beyond the cloud in the broad sunlight with such heavy and sudden peals of thunder which was truly startling—but not a drop of rain. Saturday, the 13th, was considered the *warmest* day ever known here. It is not half the year that the thermometer rises as high as 90° in August. The last time it rose to 90° in August, was in 1850, Aug. 5th, when it was at one o'clock just 90°. The next previous was Aug. 1848, the 10th, 12th, and 16th, when it stood at 1 P. M. at 90 each day. I perceive by the papers that Saturday was *not* the warmest day in Boston, owing, I suppose, to an Easterly wind from the ocean. Here, the wind in the forenoon

was mostly South West, but very light; but in the afternoon it was variable, blowing moderately from every point of the compass; generally, from the nearest thunder cloud. On the 17th, at 1 P. M., the thermometer stood at 64°, which is 35 degrees cooler than for four days previous.

The quantity of rain which has thus far fallen this month, amounts to 6 1-2 inches nearly, on a level; so that the land is plentifully wet, and grass land looks remarkably green and luxuriant; but the extreme heat after plenty of rain has caused the blight to fall upon potato vines, so that a rotten crop is anticipated. I find that my black potato vines show not the least sign of blight, but are perfectly green and in growing order. Corn looks remarkably well. The stalks have grown larger and higher than usual, and there is a prospect of a good crop.

Yours, &c., ISAAC STEARNS.
Mansfield, Aug. 20th, 1853.

REMARKS. — The article, a few weeks since, on the Palmer worm, signed "Isaac Stevens," and dated "Mansfield," should have been signed, "Isaac Stearns." We are sorry thus to rob our obliging correspondent of his well-merited honors.

For the New England Farmer.

WHAT KILLS THE WHEAT.

MR. BROWN:—I claim no place in the catalogue of correspondents of that most welcome weekly visitor, the *New England Farmer*, but will simply relate a fact, that, from my short opportunity, I have not been able to satisfy myself fully as to the cause.

Before our spring wheat was quite full in the milk, it began to die on one corner of the piece; and, as I was passing it, I concluded the cause was white worms eating the roots, as they not unfrequently do the herd grass. Some six days after our visiting it, I found it had died in far enough and along the edge to make several square rods, and another piece cornering near the first was sharing the same fate; for, for a distance of say ten rods along the edge, it was completely dead, extending in some two rods. On examining, I could find no worms as I expected; but soon discovered small bugs on the ground and on the wheat straw in great abundance; their largest size was that of a pinched kernel of wheat, or about half that of a full kernel. The small ones were black, but as they grow larger their wings turn a sort of drab color.

I am not able to point out their work, except that in the morning they were seen in abundance on the straw and heads of the grain, closely packed round a joint in the straw, or where the leaf spreads off from the straw, and on the head. When the straw first died, it was as white as ever I saw any unbleached straw until it turned dark by dew and rain—the grain shriveling much more than if it had been cut in the same unripe state. I let it stand till some half acre was spoilt, and then cut it. Every one here that I have talked with, appears an entire stranger both to the dying of the wheat and to the bugs I have described. In watching their movements the other day, I found them dead in bunches on the ground, so that I might easily have filled a table spoon in a place. I

notice the same appearance of dying in some pieces in the neighborhood. Our winter wheat was very nice with the exception of being winter killed considerably.

Corn looks well so far. Potatoes also are doing well. Most of the swallows left early in this month, but some are not gone yet, owing to their young ones not having come to maturity—second brood, I suppose. D. FAY.

Sandwich, 8 Mo. 17, 1853.

WHAT CHEMISTRY MAY DO FOR AGRICULTURE.

We have spoken in high terms of Professor JOHNSTON's forthcoming work on the "*Elements of Agricultural Chemistry*," and have laid before the reader some extracts from it. We now give the leading chapter, and believe that the general reader will find it so plain, interesting and instructive, as to desire to read the whole work.

"The object of the practical farmer is to raise from a given extent of land the largest quantity of the most valuable produce at the least cost, in the shortest period of time, and with the least permanent injury to the soil. Chemistry, Geology, and Chemical Physiology throw light on every step he takes, or ought to take, in order to effect this main object.

SECTION I.—WHAT CHEMISTRY, GEOLOGY, AND CHEMICAL PHYSIOLOGY MAY HOPE TO DO FOR AGRICULTURE.

But there are certain definite objects which, in their connection with agriculture, these sciences hope to attain. Thus, without distinguishing the special province of each, they propose generally:—

1. To collect, to investigate, and, if possible, to explain all known facts in practical husbandry.—This is the first duty—a laborious, difficult, but important one. Many things which are received as facts in agriculture, prove to be more or less untrue when investigated and tested by experiment. Many ascertained facts appear inexplicable to the uninstructed—many even opposite and contradictory, which known principles clear up and reconcile—yet there are many more which only prolonged research can enable us to explain!

2. From observations and experiments made in the field or in the laboratory, to deduce principles which may be more or less applicable in all circumstances. Such principles will explain useful practices, and confirm their propriety. They will also account for contradictory results, and will point out the circumstances under which this or that practice may most prudently and economically be adopted.

Armed with the knowledge of such principles, the instructed farmer will go into his fields as the physician goes to the bedside of his patient,—prepared to understand symptoms and appearances he has never before seen, and to adapt his practice to circumstances which have never before fallen under his observation.

To deduce principles from collections of facts is attended with much difficulty in all departments of knowledge. In agriculture, it is at present an unusually difficult task. Observations and experiments in the field have hitherto been generally made with too little care, or recorded with too little accuracy, to justify the scientific man in con-

fidently adopting them as the basis of his reasonings. A new race, however, of more careful observers, and more accurate experimenters, is now springing up. By their aid, the advance of sound agricultural knowledge cannot fail to be greatly promoted.

3. To suggest improved, and, perhaps, previously unthought-of methods of fertilizing the soil.—A true explanation of twenty known facts or results, or useful practices, should suggest nearly as many more. Thus the explanation of old errors will not only guard the practical man from falling into new ones, but will suggest direct improvements he would not otherwise have thought of. So, also, the true explanation of one useful practice will point out other new practices, which may safely and with advantage be adopted.

4. To analyze soils, manures, and vegetable products.—This is a most laborious department of the duties which agriculture expects chemistry to undertake in her behalf.

a. Soils.—The kind and amount of benefit to be derived from the analyses of soils, are becoming every day more apparent. We cannot, indeed, from the results of an analysis, prescribe in every case the kind of treatment by which a soil may at once be rendered most productive. In many cases, however, certain wants of the soil are directly pointed out by analysis; in many others, modes of treatment are suggested, by which a greater fertility is likely to be produced,—and, as our knowledge of the subject extends, we may hope to obtain, in every case, some useful directions for the improvement or more profitable culture of the land.

b. Manures.—Of the manures we employ, too much cannot be known. An accurate knowledge of these will guard the practical man against an improvident waste of any of those natural manures which are produced upon his farm—thus lessening the necessity for foreign manures, by introducing a greater economy of those he already possesses. It will also protect him from the ignorance or knavery of the manure manufacturer. The establishment of such manufactories, conducted by skillful and honorable men, is one of the most important practical results to which the progress of scientific agriculture is likely to lead. And if it cannot prevent uncorruptulous adulterators from engaging in this new traffic, chemistry can at least detect and expose their frauds.

c. Vegetable Products.—In regard, again, to the products of the soil, few things are now more necessary than a rigorous analysis of all their parts. If we know what a plant contains, we know what elementary bodies it takes from the soils, and, consequently, what the soil must contain, if the plant is to grow upon it in a healthy manner,—that is, we shall know, to a certain extent, how to manure it.

On the other hand, in applying vegetable substances to the feeding of stock, it is of equal importance to know what they severally contain, in order that a skillful selection may be made of such kinds of food as may best suit the purposes we intend them to serve.

5. To explain how plants grow and are nourished, and how animals are supported and most cheaply fed.—What food plants require, and at different periods of their growth, whence they obtain it, how they take it in, and in what forms of

chemical combination! Also, what kind and quantity of food the animal requires, what purpose different kinds of food serve in the animal economy, and how a given quantity of any variety of food may be turned to the best account? What questions ought more to interest the practical farmer than these?

Then there are certain peculiarities of soil, both physical and chemical, which are best fitted to promote the growth of each of our most valuable crops. There are also certain ways of cultivating and manuring, and certain kinds of manure which are specially favorable to each, and these again vary with every important modification of climate. Thus chemical physiology has much both to learn and to teach in regard to the raising of crops.

So, different kinds and breeds of domestic animals thrive best upon different kinds of food, or require different proportions of each, or to have it prepared in different ways, or given at different times. Among animals of the same species, also, the growing, the full-grown, the fattening, and the milking animal, respectively require a peculiar adjustment of food in kind, quantity, or form. All such adjustments the researches of chemistry and physiology alone enable us accurately to make.

6. To test the opinions of theoretical men.—Erroneous opinions lead to grave errors in practice. Such incorrect opinions are not unfrequently entertained and promulgated even by eminent scientific men. They are in this case most dangerous and most difficult to overturn; so that against these unfounded theories the farmer requires protection, no less than against the quackery of manufactured manures. It is only on the basis of often repeated, skillfully conducted, and faithfully recorded experiments, made by instructed persons, that true theories can ever successfully be built up. *Hence the importance of experiments in practical agriculture.*

Such are the principal objects which chemistry, aided by geology and physiology, either promises or hopes to attain. In no district, however, will the benefits she is capable of conferring upon agriculture be fully realized, unless her aid be really sought for, her ability rightly estimated, and her interference earnestly requested. In other words, what we already know, as well as what we are every day learning, must be adequately diffused among the agricultural body, and in every district means must be adopted for promoting this diffusion. It is in vain for chemistry and the other sciences to discover or suggest, unless her discoveries and suggestions be fully made known to those whose benefit they are most likely to promote."

DESTROY THE APPLE WORM.

The present season will be a good time, to diminish the numbers of the apple worm.

As there will not be so many apples as usual, of course, there cannot be so many of these insects propagated, and an opportunity thus offers to thin off the numbers of the remainder, so that the apples which may grow another year, will not be so much infested with them.

There are several ways by which this may be done. One way, is to let hogs or sheep run into the orchard, which will be likely to eat the apples which these worms cause to fall and thus destroy them. Another mode is to gather up the

windfalls, and either throw them over to the hogs, or cook them, and mix them with the swill that you feed to the hogs, and thus be sure to destroy them.

There is another way by which many of them can be entrapped and killed. These worms sometimes leave the apple while it hangs on the tree, and crawl down the trunk in search of some convenient place, to spin their cocoon, in which to undergo their transformation, into a miller or moth state.

If you place a woolen rag in the crotch of the tree, the worms, in their journey down, will be very likely to come in contact with it, and finding it warm and comfortable, will be likely to crawl under it, and spin their cocoons there.

They can then be discovered by lifting up the cloth, and thus easily destroyed. It is worth some little pains to diminish their numbers at this time.—*Maine Farmer.*

MOUNTAIN BORER.

The *Hartford Times* speaks as follows of an invention by a Mr. Talbot of that city, called the "Mountain Borer:—

"Worked into its own machinery, is an engine of 60 horse power. This drives four piston rods, horizontally, and these turn four half-circle plates, of stout proportions, to which circular revolving blades are set. These four plates are turned with exactness about one-fourth of a circle and back, and are set upon a revolving plate, of about ten feet in diameter, and as thus set, cut a circle of 17 feet in diameter. The machine weighs about 80 tons, and is of stout proportions throughout. The motion obtained by this invention is novel—entirely new. By it the revolving knives, each running its quarter circle, cut completely from the centre to the circumference, and they do their work steadily and surely, cutting a round hole as they are turned by the large or centre plate. But we cannot describe the great machine so as to give a good idea of it, and will not attempt it. We say, however, that it stands among the greatest inventions of the age, and will bore its way to an enviable notoriety. It is to be taken to a rock at or near Harlem, N. P., for an experimental trial. All the rare things in the Crystal Palace combined, are not equal to this machine, in the way of interest to the lover of true mechanical genius and bold conception."

DEPTH OF THE ROOTS OF TREES.

In the spring of 1850, I removed an apple tree which was growing on a gravelly ridge, to a place prepared for it a short distance from whence it was taken. The tree was six inches in diameter, had been planted, I should judge about twenty years, and had been top-grafted a few days previous to its removal. The tree and most of the grafts set in it are growing thriftily.

In the place where the tree stood, I sunk a well, and in the digging traced the roots of the apple tree downwards to a depth of over twelve feet below the surface of the ground. My attention was called by the appearance of the roots, as the workmen were going on with their work, and a measurement was made. How much deeper the roots could have been traced, I cannot tell, but I was well satisfied that they did extend some little

below the measurement. From the great loss of roots, by their spreading so deep and wide, I had little expectation of saving my tree, and still less the grafts so recently set, but was most agreeably disappointed in both.—*Rural New-Yorker.*

For the New England Farmer.

APPLICATION OF TAN TO POTATOES.

Mr. Brown:—Early this month my attention was called to a field of potatoes, several acres, on the farm of Gen. Sutton, (which I believe you have visited this season,) presenting features so striking as to be worthy of notice. The entire field was plowed the last Autumn, with the Michigan sod and subsoil plow, to the depth of about nine inches, and manured with compost in like manner throughout. In the Spring it was furrowed deep, and the potatoes were dropped in continuous rows. On one side of the field the potatoes were covered with tan, before the dirt was put over them, taken directly from the tannery; on the other side, no tan was applied. In all other respects they were treated alike. When I first saw them, the vines throughout appeared healthy and vigorous, the only difference was, where the tan was applied, they were higher and larger than the others. This was explained upon the supposition that during the dry weather of June and July, the tan had checked the evaporation from the earth below, and the sod that had been covered by the subsoil, and thereby aided the growth of the potato. At this time, no appearance of blight, or discoloration of the vines, was to be seen on any part of the field. To day, when I looked at them, on that part of the field, where no tan was applied, the vines were completely fallen and discolored, presenting a gloomy aspect. Where the tan was applied, the vines are still green and luxuriant—only here and there a sprout otherwise—probably where the tan did not completely cover. What is to be the result of the application of the tan upon the tubers to be formed, can only be determined when the crop is matured. Perhaps they will all be tainted with *the rot*, as most other fields in this vicinity now give indications of being. I state the facts, that the curious in these matters may look for themselves, while the crop is in the field. It is situated on the southerly side of Aborn Street, in Salem, near the Gen.'s large barn. Probably, when other cares will permit, the proprietor will have more time to look after the humbler, but not less useful and honorable pursuits of his well-cultivated fields.

The public are under great obligations to gentlemen like Mr. Sutton, for many well conducted experiments in cultivation. In this way, men of wealth and public spirit can do much for the instruction of the farmer, even though, they do not put their own hands to the plow, or shoulder to the wheel. Mr. S.'s experiment in 1851, of applying various kinds of manure to the growing of potatoes, published I think in the *Journal of Agriculture* at that time, was highly creditable and useful. If my recollection is right, those grown on *rotted tan alone*, yielded most and of the best quality. If it be true that tan can be used for the *growing* or the *protecting* of potatoes, this is a fact worthy of notice. In the village of South Danvers alone, it is ascertained that about 12,000 cords of hemlock bark are annually used in the tanneries.

I presume about as much more is used in the adjoining tanneries of Salem. This spent bark, is now dried and hosed, and used in the Steam Mills, for the grinding of bark. For this purpose, when dry, it is valued at about *one dollar a cord*. Very truly yours,

Danvers, Aug. 20th, 1853.

NOTE.—Almost every farmer I meet, speaks of the decay of his potatoes. The fond hopes indulged the last year, that the disorder had passed its climax, I fear, rest on a slippery foundation. Let us have the facts; from these alone, can the true cause be learned.

REMARKS.—We should be glad to say something in relation to the use of tan, the potato crop, &c., but the pressure of other duties, at present, prevents. From personal observation, we can speak of the beautifully cultivated fields of Gen. SUTTON, and say that a visit to his workshop, and the room for the storage of his Farm Implements, the sheds for his carts, wagons, &c., will richly repay any farmer for a travel of twenty miles. This part of his farm husbandry excels anything of the kind we have ever seen, in any State. We received several lessons there which have already had an influence on our own premises.

For the New England Farmer.

LIME FROM GAS WORKS AND MUCK.

MR. BROWN:—I see inquiries from your correspondents concerning the value of gas lime, and its efficiency in decomposing peat muck, &c. I send you herewith an analysis of the gas lime from it. It was made for E. B. Brown, Esq., of Stonington, Ct., by Dr. Chilton, of New York.

Caustic lime.....	43.94
Carbonate of lime.....	30.15
Water.....	16.00
Phosphate of lime.....	1.00
Sulphate of lime.....	1.12
Hydro Sulphate of lime.....	3.14
Sulphate and Hydro Sulphate of lime.....	3.94
Trace of iron and oily matter.....	2.11
Loss.....	20
	100.00

It will be seen by this analysis that 43 per cent. of this lime is in a caustic state, and must act as powerfully upon vegetable fibre as any fresh burnt lime. The thirty per cent. of carbonate of lime is as good as any other slacked lime. It is what all our granite soils, that have a fair proportion of organic matter in them, need. The one per cent. of phosphate of lime and the 1.12 per cent. of sulphate, or plaster of paris, are well known to be valuable on almost all soils. The next three constituents are probably of some value. The iron enters in small quantities into most vegetable products. The precise nature of this oily matter is not revealed by the analysis. But if the coal contains ammonia, it is probably to be looked for in this constituent of the gas lime.

Twenty-five cents a barrel is much higher than the market price of the article in New York. There it is put on board the vessel at one and a half cents per bushel. It was sold last year at two cents a bushel. The accumulation of the article upon the hands of the Gas Company has probably caused

this fall in the price. Mr. Brown procured a thousand bushels for decomposing muck, and it succeeds so well that he is enlarging his operations. For this purpose, or for spreading upon the surface of reclaimed swamps, it is perhaps the cheapest source of lime at the New York price. At 25 cents a barrel, it is a question if it is not dearer than oyster shell lime, fresh burnt, which can be procured in the neighborhood of most of our cities at from five to seven cents per bushel. Your correspondents can safely go ahead with the gas lime and muck.

As muck and marsh mud are coming into fashion, your readers will be interested in the following analysis:—

Analysis of Peat Muck on E. B. Brown's farm, by Prof. Norton.

Lime.....	45
Magnesia.....	17
Alkaline salts.....	31
Alumina, iron and phosphoric acid.....	3.06
Soluble Silica.....	13
Insoluble matter, sand, &c.....	58.71
Organic matter.....	37.48
Loss.....	69
	100.00

Analysis of Marsh Mud made for Col. E. W. Seabrook, of Edisto Island, S. Carolina, by Prof. C. U. Shepard.

Water.....	19.66
Organic matter.....	3.50
Silica.....	67.50
Carbonate of iron.....	4.75
Alumina.....	1.50
Carbonate of lime and magnesia.....	1.64
Phosphate of lime and do.....	trace.
Chloride of sodium.....	0.45
Chloride of potassium.....	0.01
Chloride of magnesium.....	0.05
Sulphate of lime and magnesia.....	0.05
Loss.....	39
	100.00

W. CLIFT.

Stonington, Ct., Aug. 14, 1853.

TURNIPS.

Turnips may remain in the field till late. They are far less injured by frost than many are inclined to believe. It is very often the case that turnips are frozen into the ground, and on the frosts breaking up again in the course of a few days, are removed as hard and crisp as before. The action of the soil neutralizes its effects, and sometimes a succession of several weeks of warm weather, after a freezing night, adds as much to the weight and value of the crop as they gained in twice the time before the advent of severe cold. A low temperature is favorable rather than adverse to the development of all the species of the turnip tribe. Cabbages grow rapidly in cold weather; hence the practice so prevalent at present of allowing them to remain out till snow falls. In packing turnips of all kinds, care should be taken to secure them effectually against the light and air. The more perfectly this is accomplished, the greater will be the certainty of their keeping well, and the more wholesome and nutritive will they be found, both for stock and for table use.

VEGETABLE REPRODUCTION.

The reproduction of vegetables is very analogous to that of the animal kingdom. The organs of production are the stamen and pistil. These are situated within the colored leaves, which, together with these interior and essential parts, form the flower. Sometimes both stamen and pistil are found in the same flower, which is then called a perfect flower. Sometimes the flower has only a stamen, or only a pistil, and then it is called an imperfect flower. It is necessary that the stamen and pistil should communicate in order to the reproduction of the plant. In a perfect flower this communication is effected by the contact of the stamen and pistil. When, however, the flowers are separate, and communication cannot be had by contact, the fecundation is effected by the agency of the wind, which carries the pollen or dust of the stamen and deposits it on the pistil of the other flower. Sometimes the male and female flower are not on the same plant, but a different one, as is the case with the strawberry, the hemp and hop. Sometimes they are on the same plant, but on a separate stem, as the melon. In plants of this kind, having imperfect flowers, the fecundation is supposed to be incomplete or to fail, and it is sometimes assisted by the hand of the gardener. In this way the varieties of certain species of plants are chiefly produced.

These hybrid plants can be produced only when the parent species are nearly allied to each other. If the hybrid bear flowers which become fertilized by its own pollen, it may produce seeds from which similar may be raised. This may be repeated for two or three generations, by agency of its own reproductive organs, or by intermixture with those of the parent stock or species. In this last case, however, it will be a new variety. If the several parent stocks from which the variety proceeded are of distant species, the new hybrid race becomes soon extinct, unless it be continued by intermixture with one of the parent stock, in which case it becomes merged in that stock.

Those flowers which contain the pistil are called fertile flowers, because they are capable of reproduction if fecundated by the stamen bearing flower. The sterile flower may be easily distinguished from the fertile, by the knob or bulb at the top of the stamen, which becomes covered with a fine yellow dust, called pollen, which is the fructifying element of the stamen, and which must, in order to the reproduction of the plant, be brought into contact with the stigma or expanded head of the pistil in the fertile flower.

This knowledge is valuable to gardeners, as by it they are enabled to select the suitable sets for strawberries and other fruits, to assist in the production of melons by placing the pollen on the stigma, and, by selection of pollen from different species, to produce new varieties.

For the New England Farmer.

WHEAT CULTURE.

GENTLEMEN:—I am not a little delighted to see an awakening interest in wheat-growing among New England farmers. Letters have been addressed to me from different States, indicating that your own Pilgrim soil is still capable of producing bread for its people.

The foreign conclusion that your soil was exhausted of its lime, has now become a bugbear. Your celebrated Dr. JACKSON tells you that every spoonful of manure has its quota of lime, and hence *all the lime that is necessary to vegetable growth is found in the barn-yard.*

But time compels me to be brief. In a few words I would say to the farmer—particularly those who are remote—begin the business of raising the almost sure crop of winter wheat. Your potatoes rot, your spring grains rust, and the weevil troubles you. Is it not so? Now the month of September is upon you; sow your wheat early. If you have no seed at hand, send to Boston for it.* Wherever you can get corn, there you can get wheat. It is as sure a crop as winter rye, and much more so on strong sward lands. Six years' experience is my only proof; and as this is the season between "hay and grass," and little else for the farmer to do than plow his land, he will find his reward in this new field of labor, and his granary replenished in an important item of domestic comfort.

Yours truly, HENRY POOR.

New York, Aug. 22, 1853.

* Seed may be found at Ruggles, Nourse & Mason's, and other seed stores.

SYMPATHIES OF MIND WITH THE BODY.

All are aware of the wonderful influence exerted by the condition of the body upon the faculties and affections of the soul. The following, from the Essay on Indigestion, by Dr. James Johnson, contains some very remarkable facts:—

"Many a happy and lucky thought has sprung from an empty stomach! Many an important undertaking has been ruined by a bit of undigested pickle—many a well-laid scheme has failed in execution from a drop of green bile—many a terrible and merciless edict has gone forth in consequence of an irritated gastric nerve. The character of men's minds has often suffered from temporary derangements of the body; and thus, health may make the same man a hero in the field, whom dyspepsia may render imbecile in the cabinet."

Dr. J. illustrates his subject in his usual felicitous manner. The following are some of his remarks:—

"I lately saw a gentleman of brilliant talents and prolific genius, who could sit down and write extemporaneously whole pages of superior poetical effusions, with scarcely an effort of the mind, and who would yet, from sudden derangement of the digestive organs, be so completely and quickly prostrated in intellectual power, as not to be able to write three lines on the most common subject. On a late occasion, when he had merely to communicate an official transaction that required not more than half a dozen lines in the plainest language, he could not put pen to paper, though the attempt was made fifty times in the course of two days. At length he was forced to throw himself

into a post-chaise, and perform a long journey to deliver orally what might have been done in one minute by the pen. In half an hour after this ride was performed, he sat down and wrote an ode descriptive of his own state of nervous irritability, which would not have done discredit to the pen of a Byron.

"The author of this essay has himself been so enervated by a fit of what is called indigestion, as to be utterly incapable of breaking the seal of a letter for twenty-four hours—though, to all appearance, in good health at the time."

For the New England Farmer.

MOWING MACHINES.

MR. EDITOR:—I have been exceedingly gratified with some accounts of a trial of mowing machines, published in your valuable paper, and also the strong interest you seem to take in this matter. As this is an important subject for farmers, I will, with your permission, offer a few thoughts on this interesting topic. The late JUDGE WOODBURY, at one of our agricultural festivals, pronounced the hay crop, next to the wheat crop, as the most important crop of the country, and he estimated its yearly value in the New England States at *thirty-eight millions of dollars*. If this opinion has any foundation in fact, we see the magnitude of the interests involved in this production. What then, let me ask, has been done to improve the methods of harvesting this immense department of cultivation? While our agricultural warehouses have been flooded with improved plows and other implements for the various kinds of farm work, I am not aware that any new mode of cutting grass has been introduced in this part of the country for the last fifty or hundred years. Other sections of the union have shared largely of the spirit of the age, but we have remained stationary. Now in my judgment these things ought not so to be. It is true the horse rake has done something to help the farmer in haying, but it has not done all that can be done, or enough. The severity of labor at this season is yet proverbial. The farmer is still compelled to tug and toil and bear the heat and burden of the day, and he needs relief. While, then, we are thankful for the horse rake, we want something more. The horse rake has lived long enough in single blessedness; we wish to see it married to the mowing machine, and when this union is effected there will be no want of issue. These machines have been in use in the middle and western States for some years; and while it is admitted that they are not all of equal merit, there is one upon which the testimony is uniform and decisive. I allude to KETCHUM'S MOWING MACHINE. This has several times been put in competition with others, and has always borne off the palm. All who have seen it work concur in one report, and that is praise. In a late number of the *New England Farmer* there is a letter from DAVID LYMAN, of Middleton, Ct., and this is his statement. "I have tried it in thin June grass, in clover and herds grass, both standing and lodged, and in corn meadow grass, and it does the work fully equal to the best mowers. All who have seen it express this opinion. It works better on uneven ground than any one would suppose. It is strong and durable, and will, I think, be

used successfully on nine-tenths of the mowing fields of New England, if properly prepared." He also states, "I can in three hours cut over as much surface as five men usually mow in the forenoon." In a late trial in the State of Ohio, such was its excellence and efficiency that, in the opinion of one present, it could have been sold at auction for one hundred and fifty dollars. Five hundred were sold last year, and one thousand does not meet the demand the present year.

There are some reasons which seem to call loudly for the mowing machine. One is the high price of labor in haying. During the past season good men could not be obtained in many places for less than nine shillings a day and board, and they were even scarce at that. Another consideration is that we cannot hit upon the proper time of cutting the grass by the old method of mowing; some will be cut too soon, and other parts too late; whereas, by the use of a machine, we can at once facilitate and accelerate the operations of haying so as to bring every thing within its proper time and place.

I am aware that some may object against the use of this implement because of the expense; but if a single individual should think that he could not afford to buy one, two or three neighbors might club together and purchase one for their common benefit, and would save enough by being relieved from the necessity of hiring extra hands, to pay for the machine in one or two years. It may, perhaps, be thought that the circumstance of working the machine with two horses may occasion difficulty or inconvenience, as most farmers have but one. But in reply to this it is enough to say that the Hon. SAMUEL D. HUBBARD, of the city of Middleton, uses his with a yoke of oxen; and I know of no reason why oxen will not do as well as horses, except that they do not work so fast.

To prepare the way for the introduction of these machines, I would suggest for your consideration the expediency of having one or more of them submitted to the test of an experiment, similar to the late trial in Ohio. If it were not too late to find grass to work upon, the gathering at a cattle show would be just the time for an exhibition, and there cannot be a doubt that it would attract vastly more attention than the ploughing match. Nothing could have a happier tendency to dispel doubt and banish prejudice than to see one in actual operation. What our farmers want is ocular demonstration. They want to see with their own eyes and handle with their own hands, and then they will be convinced. In this connection I subjoin Mr. KETCHUM'S account of his machine, as published in the *Boston Cultivator* Feb. 10, 1849.

KETCHUM'S PATENT MOWING MACHINE.

The subscriber having, during the past summer, submitted his Mowing Machine to the most severe tests of trial, in every variety of grass and on smooth and uneven surfaces, and having brought it to a degree of perfection, is now ready to offer it to the public with the utmost confidence in its complete success, with the assurance that the following statements may be relied on as facts:

1st. The machine is capable of mowing from 10 to 15 acres of grass a day, with one span of horses and one person to drive. In addition to this, it leaves the grass evenly spread upon the ground.

2d. It cuts the grass more closely and evenly than is commonly done with a scythe by the best mowers.

3d. It is built mostly of iron; is strong and durable; is not liable to break or get out of repair with fair usage.

4th. It is less work to keep the cutting teeth sharp and in order than it is a scythe.

5th. It is easier work for a man and a team to propel and manage the machine than it is a harrow.

6th. The construction of the machine is mechanism reduced to its simplest elements.

7th. All the difficulties in mowing by machinery are overcome. It may be done, and this machine will do it. The price of the machine is \$100. Any application for the right to manufacture and vend them in specified districts, or for the machine, may be addressed to the subscriber, or to S. W. Hawes, of this city, and will meet with prompt attention. **WILLIAM F. KETCHUM.**

Buffalo, Sept., 1848.

In conclusion, let me appeal to the great house of RUGGLES, NOURSE, MASON & Co., and like establishments of Boston, and ask if there is not any one among them of public spirit enough, to say nothing of private interest, who will engage in this cause. It needs not the gift of prophecy to say that he who shall embark in this enterprise will not lose his reward. Like the fortunate publishers of Uncle Tom's Cabin, he may anticipate a rich harvest of gain, and he will not be disappointed. **A.**

Action, Aug. 31, 1853.

REMARKS.—Our correspondent has not run ahead of our own desires in regard to the Mowing Machine. The season has passed for the introduction of one this year; but next season we hope to see them introduced, and shall give the matter personal attention. We would inform him that Messrs. Ruggles, Nourse, Mason & Co. have already sold Ketchum's and other Mowing Machines, and will supply any demand made upon them in future.

IMPROVEMENTS AT THE CAPITOL.

The labors of Major B. B. French, the new commissioner of Public Buildings, are well employed in the improvements he is making at the Capitol. The whole work now in progress there (except the extension of the two houses of Congress) is under the superintendence of Major French, and he is acquitting himself admirably.

On the exterior the new group of statuary by Greenough, representing the "Triumph of Civilization," is being placed on the north base of the great staircase, on the east front. The group is composed of several pieces of art, embracing the civilized man, the savage, a woman with her son in her arms, and a trained dog, all to be placed upon a pedestal, consisting of an irregular mass of rock, and adjusted in accordance with the original idea of the illustrious American artist.

In the interior the building has been renovated beautifully from the base to the summit. The two rotundas of the Senate and House have been elegantly painted. The frescoing of the Hall of Representatives is a great improvement; and when

the curtains and carpets are arranged, the room will present a splendid appearance.

The large paintings have been much improved by the cleaning of the frames and the application of varnish to the canvases. Should the great painting of the Discovery of the Mississippi, by De Soto, arrive in time to complete the series of pictures, the chief rotundo will be beautiful and grand indeed. It is stated that this painting is already on its way. We ardently hope it may arrive and be put up before the commencement of the next session of Congress.

But the great feature of these improvements is the new hall of the Congressional Library. This hall is now composed entirely of iron, having two galleries and three rows of alcoves surrounding the room. The painting, gilding, carpeting and furnishing are truly elegant; the whole constituting a public library hall without its equal in the world. The room will be opened to visitors during the day; and we can assure all our readers who may be present on that occasion that they cannot fail to be much pleased.—*Washington Union.*

STOCK—NATIVE AND IMPROVED.

The wild cattle of Great Britain, and from which was derived its present race of improved stocks, and a pure specimen of which is said to be still preserved in the Park at Chillingham Castle, the seat of the present Earl of Tankerville, are thus described by Mr. Bailey, the steward of the Earl of T——.

"The color of these animals," says Mr. B., "is invariably white; the whole of the inside of the ear, and about one third of the outside, from the tip downwards, red; the horns are white, with black tips, and bent upwards. Some of the bulls have a thin upright mane, about an inch and a half or two inches long. The weight of the oxen is, from twenty-five to forty-five stone, of fourteen pounds. The beef is finely marbled, and of excellent flavor. When the cows calve, they hide their calves for a week or ten days in some sequestered situation, and go and suckle them two or three times a day. If any person comes near the calves, they clap their heads close to the ground, and lie close like a hare in a form, to hide themselves. This is a proof of their native wildness, and is corroborated by the following circumstance which happened to the writer of the narration, who found a hidden calf two days old, very lean and very weak; on stroking its head it got up, pawed two or three times like an old bull, retired a few steps, and bolted at his legs with all his force; it then began to paw again, bellowed, stepped back, and bolted as before; but knowing its intention, and stepping aside, it missed him, fell, and was so weak that it could not rise, though it made several efforts; but it had done enough; the whole herd was alarmed, and coming to its rescue, obliged him to retire; for the dams will allow no person to touch their calves, without attacking him with the utmost ferocity."

As to the value of the several kinds of cattle imported into this country from Great Britain, the Durhams, Devons, Herefords, Ayrshires and Alderneys are the most popular and best known. Of these, many prefer the Devon. It is an excellent kind, especially for working oxen and beef. They are thus described by ARTHUR YOUNG, formerly Secretary of the Board of Agriculture, and one of the most careful observers and best writers of the day.

"The thorough bred Devon is of a bright red; neck and head small, eyes bright and prominent, and round it a ring of bright yellow, the nose round the nostril having the same color; the horn clear and transparent, upright, tapering, and gently curved, but not tipped with black."

There can be no question that a very important improvement may be made in our native stock by judicious crossings with the more valuable imported stock; yet there appears not to be the necessity for this crossing of different breeds and bloods in order to elevate the character of the former, which many regard as indispensable. The great error in our system is the habitual selection of our finest animals for the market, instead of retaining them as breeders. A fine cow or a well proportioned bull is almost sure to be disposed of, while the poor and diminutive animals are kept for propagation. No farmer thinks it judicious to sell his best seed corn, and plant the shrivelled and imperfectly formed kernels. His seed wheat, potatoes, oats, beans, peas, and rye for stocking his lands, are selected from the best. Why, in stocking his farm with animals, should he not pursue the same good policy? The practice of "breeding in and in," as it is termed, is also another cause of depreciation. In the human family this law, so repugnant to every feeling of delicacy, is productive of precisely the same result as in the case of domestic animals. Intermarrying within certain degrees of consanguinity is sure to stultify the progeny, and render them imbecile, idiotic, and frequently insane. Its effects are highly adverse to all healthy developments, physical, moral and intellectual, of the true man. The royal line of Spain is reduced to a condition of the most pitiable imbecility and inefficiency, by the aristocratical and impolitic practice of intermarriage, adopted with a view of preserving from corruption the purity of the royal blood. At one period, not a single individual, it is asserted, could be found possessed of sufficient ability to direct the most ordinary affairs, much less to sway the sceptre of a realm over whose interests he was expected to watch with the vigilant anxiety of a parent's care.

When a well developed animal is seen in our flocks or herds, we should refuse all offers for it, and dispose of our diminutive and less valuable animals, even though the price be small. It is a bad policy in this matter to disregard future,

though remote, for present gain. If we wish for good animals—such as will amply repay us for the expense and trouble of keeping them, and be an ornament both to our farmers and to our common country, we must revolutionize the entire system of breeding, as it now exists and is practised, and adopt in its place one which will obviate the unpleasant and disgusting results it is so admirably calculated to produce. With our own excellent breed of black cattle, we can accomplish much even without foreign aid; but with it we can do much better by judicious crossings.

EFFECT OF RAILROADS.

At a meeting of the FARMER'S INSTITUTE, New York, where the subject under discussion was the benefit of railroads to the farmer, Mr. SOLON ROBINSON, Editor of the *New York Agricultor*, said:—

"I have tried to convince farmers of the immense value of this rapid communication to them—that it was their salvation. The first effect has been to bring beef cattle one thousand miles to our market in a week. Game and poultry come the same distance in forty-eight hours. The oxen come as the market requires, notice of which goes by telegraph for the number required. The cost per ox is about ten or twelve dollars, whereas, on foot, as of old, the oxen travel with loss of flesh and heavy expense on the road, from sixty to ninety days before they reach New York. Strange that many farmers do not understand this. Sometimes our city would starve without this railroad supply. Last spring all the chief articles within striking distance were exhausted; now we rarely have on hand one hundred of oxen at a time. Some cattle are shipped from Chicago to Buffalo—some from Indiana go by cars to Cleveland on Lake Erie, thence by cars to Dunkirk and to Buffalo, thence the greater part come by the Hudson river. Last week there came in a drove of cattle raised by the Cherokee Indians, marked with their hieroglyphics. An Illinois drover had bought them, fed them a while, and then brought them here by railroad, &c. Look at the map and see what a walk that drove must have had to reach New York without the steam and railroad! Oxen can travel only about ten or twelve miles a day. And our milk for the morning coffee was milked last night, and drawn from Chatham Four Corners, one hundred and thirty miles distant from our city. Some years ago it was proposed to Mr. R. L. Stevens, to have a freight train on his road, but he thought one car only would be used, and that would not pay. Now look—there is a blackberry train! All this intercommunication is a great civilizer—all sorts of people are brought to a knowledge of each other, and a knowledge of the business of their own country and the world. The birds used to have the blackberries all to themselves—nobody could get the one-thousandth part of them. I say nothing of the whortleberries which now come by rail, and are on the tables of everybody. And the lands near the railroads are growing more valuable every day, and they are in course of cultivation and improvements, and without the railroads they would not have been reached this century, and hardly that. The benefits go with the roads.

One improves the other with a rapidity which resembles that of the trains which glide through the lands."

For the New England Farmer.

THE FARMER'S SONG.

BY HERBERT INGALLS.

On Monadnoc's lofty summit
Burns the sun of early morn,—
Up the East he comes in beauty,
And the day again is born;
Forth with cheerful hearts and happy,
To our labor let us hie,
Ere the birds have hushed their matins,
Or the sparkling dew is dry.

Cheerful are our hearts and voices,
Every limb is light and lithe,
And the billowy grass before us
Bendeth to our keen-edged scythes;
And when noon-tide pours upon us,
Hastening to the fields away,
We inhale the rarest perfume
'Mid the sweetly-scented hay.

When the quiet evening closes,
Gathering to our homes again,
We enjoy the sweet reflection,
That our life is not in vain.

Little know the pampered idlers
That despise our stubborn soil,
All the joys of mind and body
That spring up to bless our toil;
Not within the shadowy future
Look we for a brighter day,
For each bright returning morning
Brings new duties with its ray.

Thus our days in peace are passing,—
Thus shall pass till life is o'er;
We are healthful, we are happy,
What can mortal covet more?

Ridge, N. H., Aug. 20.

For the New England Farmer.

THE SEASON AND THE CROPS.

The farming season of 1853 opened beautifully. The snows were early dissolved, the frost which penetrated the earth the last winter to but a moderate depth, soon yielded to the warm sunshine, and mud, the common appendage of a New England spring, held but a short and timid reign. Of course, spring crops were got in, in good season and condition, and the moist month of May operated favorably to the full production of agricultural products. June followed, a rainless, almost cloudless month, and the warm sunshine, unaided by moisture, severely pinched the grass crop, so that with the killing out of the drought of 1852, and the dryness of this month, the average crop will not greatly exceed that of last year. On some farms it may be one-fourth greater in yield, while on some, it falls short. It is pretty certain that grass lands in general must either be re-stocked, manured, or something else done for them, before they can be restored to the fertility of 1851.

Oats, barley, peas and mealins have given good crops. Corn came up well, but in many fields was much injured by the worm, which, contrary to established theory, showed no respect to the time or manner of plowing. Indeed, we saw many fields which were plowed last fall, some of them as early as Aug. 20, where his desperado acts were, so ef-

fectual as to leave sad mementoes of his labor in visible form through the summer, and in one field where the land was plowed last September, the crop was nearly ruined by this worm. (Quere, has the dryness of last year any thing to do with the increase of worms, &c., this season.) Potatoes exhibited a fine appearance through the summer months, the vines grew tall and stout and produced a profusion of blossoms, like the potato vines of olden time. We saw in our travels some three or four fields, where the tops gave indications of the first stages of rot, as early as Aug. 20, and in the evening in our own neighborhood, we have discovered the frost bitten odor arising from fields of this crop, which is a sure indication that the rot is in the vine, and unless this is cut off it will soon communicate to the tuber. We shall give further particulars with regard to this crop, after they are harvested.

Buckwheat gives a luxuriant growth and promises well. This, in a few years past, has become a prominent crop, and is probably the very best cleanser of foul, weedy soils, that can be introduced, and is with all a very good pulverizer.

The crop of small early fruits was good, apples, pears and plums will give but a slight crop. The excrescence on plum trees which has come upon them as a fire plague for the last two seasons, threatens their extermination. Yours truly.

Elmwood, Sept., 1853.

W. B.

For the New England Farmer.

FRUITS, &C., OF IOWA.

MR. EDITOR:—As many are yearly wandering from the old Yankee land, the home of fruit, to this Western region, it may be interesting to such to learn something of our present and future prospects of fruit. To those reared amidst the luxuries of the varieties of the fruits of the old States, a deprivation of them may be reckoned among the greatest deprivations incident to a new country.

Our native fruits are somewhat limited in number. Blackberries, black raspberries, gooseberries, strawberries, mulberries, grapes—generally inferior to the fox grape of New England—wild cherries, crab-apples, plums of various sizes, butternuts, black walnuts, hickory, pecan and hazelnuts, are the most important that now occur to me. Both the soil and climate seem well adapted to the culture of most fruits of the temperate regions. The small fruits, such as strawberries, raspberries, currants, &c., produce abundantly in our gardens. Apple trees grow luxuriantly, and Iowa can now produce as fine specimens of the apple as any State in the Union.

The successful culture of the fine cherries and pears may, as yet, be considered doubtful. Standard pear trees sometimes die in full foliage, as though the communication between the roots and trunk was suddenly destroyed. Very many of the trees, apparently thrifty, have dead spots on their trunks, from a third to half or more of their circumference. The fine cherries are often injured in a similar manner. The quince and plum trees thrive well, but the curculio generally destroys the plums.

Peaches are uncertain, though we have some years abundant crops. Budded peach trees seem to be shy bearers here, if not elsewhere. Much attention is now directed to dwarf pears, and there

are now in this vicinity promising specimens of many varieties. Thus far, the dwarfs promise well.

The Catawba and Isabella grapes do well, and some few vineyards are in cultivation.

The apple, every thing considered—its ease of cultivation, its various uses, its prolonged season in use, may be considered the staple fruit everywhere in the apple region. With these we are as well supplied in Burlington, and at as cheap a rate, as you in Boston; and our oldest orchards, as yet, have hardly approached *manhood*—young ones yearly coming into bearing, and an increasing attention paid to the planting of more orchards.

The past spring the nurseries of this county, alone, sold from forty to fifty thousand fruit trees. There is every facility of obtaining fruit trees. The nurseries here afford nearly all the varieties of fruit and ornamental trees and shrubs cultivated in eastern nurseries, and these too at a price nearly fifty per cent. below the price of eastern nurseries. We can obtain apple trees here, suitable for planting into orchards, at \$10.00 per hundred—\$90.00 per thousand—grafts, ready for planting out, at \$20.00 per thousand. A little trouble and a trifling expense give the farmer his orchard. Thrifty one year old seedlings are root grafted, grown in the nursery two or three years, planted into orchards, and these in a few years fruiting.

In the primitive days of New England these orchards were made of seedlings—relying upon chance to give them good apples enough for the table—the mass to be converted into cider. Not so here. Seldom any but grafted trees are put into the orchard; the windfalls and the refuse make our cider, and, though not of Jersey quality or reputation, it passes with the temperate while sweet; for in these days of go-aheadiveness—days of railroads and reapers and mowers, no intemperate man can stop to get drunk on the one horse power of cider. To speak after the manner of politicians, this root grafting and the multiplication of orchards in the West, has the odor of the "Young America" about it. In spite of the gophers at the roots of our trees, the borer at the trunk, and the worms and caterpillars at the foliage, it is the "Manifold Destiny" of the West to be the greatest apple region in the world.

This world will "go ahead," even on the "later clause" of Davy Crockett's motto. If right, the succeeding generation can begin where we left off—(if we don't get through)—if wrong, they have only to learn prudence from our rashness, then go ahead on another track.

We of Iowa, though west of the Mississippi, just believe that we are in the very centre—the real focus of the fertility of soil—the centre of civilization; and all the neighboring States believe the same of themselves. If there be an odor of vanity in our belief, it's of a consoling nature, and doeth good like a hot flannel in a chill. Now, to rebut the bold presumption that we have vanity or State pride, we introduce the evidence.

We have aspiring churches and school-houses; tasty dwellings and log-cabins, big rivers and big prairies; land enough for a farm for each man in the State; isms and ites, political and religious; office-seekers enough to fill all offices; men enough to supply every woman with a husband; insects that annoy man and beast; insects and reptiles to

prey upon vegetation; snakes that bite hard and easy; weeds in all their varieties; patent medicines to cure all diseases; Durham short-horns and schrubs; Morgan horses and Indian ponies; swine of the Berkshire, China, Suffolk and Prairie shark breeds; Shanghai, Cochinchina, Chittagongs, Bolton Grays, Bantams, &c. of the fowl kind; and as for the railroad mania, yours of New England could be merged in ours. In fine, just now, we are only a few grades better than other folks; but we have a "smart chance" of being transcendent in a generation or two, when we get a good cross of all the varieties of people that make our population. If we only had a "leettle sprinkling" less of the ague, a plenty of money and stone fences, this would be the place.

Nemo.

Burlington, Iowa.

REMARKS.—We publish with pleasure the above sprightly communication from Nemo, and hope to hear from him again, and learn his name.

For the New England Farmer.

POTATO AND ONION CROP.

MR. EDITOR:—"Line upon line, precept upon precept," now, as in olden time, constitutes the basis of knowledge. Of what use is it to speculate upon the chemical operation of this or that phosphate, improved or not improved, if the facts observed in the field do not sustain our speculations! My attention was arrested by the inquiry from Marblehead, what is best to be done with half a dozen acres of potatoes, so decayed as not to be worth digging! My first impression was, that there might be some exaggeration about it. Subsequent examination has satisfied me that it is no fiction. Instead of half a dozen acres, there is in that vicinity, ten times that quantity not worth digging, on land from which the largest and best crops have usually been obtained. The story is general, that the *Chenangoes* have failed almost entirely. One gentleman informed me, that from ten acres planted in their field, they could not obtain potatoes that they dared to use upon their table. This must be a serious disappointment, as well as loss—probably not less than one thousand dollars on one farm. I have noticed the field in Salem, on which the experiment was made, of covering the potatoes, when dropped, with *tan*, and saw that they were still upright and green where the *tan* was put, while the other part of the field was completely fallen and decayed—looking most dreary and forbidding. How they will turn out in the end remains to be seen; if I do not mistake, there will be at least, *two blanks to a prize*, throughout the field. It requires something more stringent than *tan*, in these days, to save the potato.

While looking after the potato crop, I have not been unmindful of the onion. At one time, the alarm was sounded that this was likely to fail also. That the *cut-worm* and the *maggot*, were taking more than their share, and that the remainder would be shrivelled and small by reason of the drought. On Saturday, I met a cultivator from Danvers with a load of empty barrels, and inquired of him, how his onions were doing this season! "Pretty well," said he. "I have gathered already one hundred and fifty barrels, and have

them dry in my barn, ready to be sent off—of the red kind, which ripen earlier than the white. They are of good size." In answer to the inquiry, how many he got upon an acre. "About 600 bushels" said he—so you see there will be onions enough for a "hasty plate of soup," even though the potato may give out.

I hope you will look into the matter and give a more precise answer to the inquiry from Marblehead, "What is to be done?" The public ask of Editors, or of members of the Board of Agriculture, or of the Secretary of the Board, instructions in these matters. Of what use is it to have doctors, if death is to seize the patient before the prescription comes!

August 29th, 1853.

REMARKS.—We know of no person so well qualified as our correspondent, both from facts in his possession, and from his constant and extended observation, to speak of the potato disease, and to offer opinions upon it. That he will discover the cause, or a remedy, at present, we have little confidence. On this subject we know nothing, only that our potatoes rot as well as our neighbors', and that we mean to bear the calamity as patiently as possible, and plant no *Chenangoes* another year!

For the New England Farmer.

HOW TO LAY OFF AN ACRE.

"In the 'Editorial' of the last number of the *New England Farmer*, (weekly) date Aug. 20, 1st page, 1st column, is the following:

"How to lay off a Square Acre.—Measure 209 feet on each side, and you will have the quantity within an inch."

Now my "cyphering" don't make it come out so, "any way I can fix it."

209 by 209 produces 43681, which is 121 more than 43560, the number of square feet in an acre. That is, in measuring land by this rule, we should gain 121 square feet in every acre, or nearly 3 acres in every 1000.

This may do perhaps where land is a *drug*, but not in this old Bay State, where almost every foot of soil is worth the *dollars* it would take to cover it.

When "River Cottage" farm is to be sold by this rule, "may I be there to see."

Again, how these 121 square feet or 17424 square inches can be added to a square acre so that "you will have the quantity within an inch," is more than *my* figures tell.

Please explain, Messrs. Editors, and oblige

Yours truly, B. L.

So. Weymouth, Mass., Aug. 25, 1853.

REMARKS.—We found the "scrap" alluded to above in one of our exchanges, and thinking it might be convenient, gave it place without testing its correctness.

A NEW CATALPA.—Dr. Warden, in the August number of the *Western Horticulturist*, gives an account of a new variety of the catalpa, which he found growing in Dayton, O. It blooms two or three weeks earlier than the other variety. The bark of the young trees is lighter in color, the

liage of a deep green and more luxuriant; the seed pods much longer; the form of the tree more upright and compact, the flower larger and a purer white. They are very plenty in Dayton, where they were first introduced some years since by Dr. J. Haines, from two trees which he found on a farm two miles south of that city. Where the original trees were obtained is not known.—*Ohio Farmer*.

THE ATMOSPHERE AND ITS EFFECTS UPON ANIMAL LIFE.

A very interesting lecture was delivered on the 11th inst. by Dr. Griscom, at the New York Mechanics' Institute, on the "Influence of Air in connection with Animal Life." The lecturer commenced by saying that he supposed some of them would be surprised to hear that they lived at the bottom of an immense ocean of air fifty miles deep; yet it was so, and the color of this ocean which is called the atmosphere, is a deep cerulean blue. To perceive this color it was necessary to be able to see at once the whole volume, and also on a calm and clear day, for no color could be perceived if seen in small quantities, or when there was either wind or haziness. In like manner the color of water could not be seen in small quantities, and was only perceptible where there was a vast expanse of ocean. The air was also a substance capable of condensation and expansion. Its expansion was seen in the winds, by which ships were made to traverse the ocean, and also in windmills. The tornado was another phase of its expansion, by which trees were uprooted and houses overturned, and was almost equal to the power of steam. The greatest weight of the atmosphere was fifteen pounds to the square inch, and this weight presses on every way, both upward and downward. To explain the pressure upwards, the lecturer exhausted the air out of a large vase, which then remained fast to the plate on which it stood, but on the air being let in it was easily removed. I remember, said he, being asked the question, if there is a pressure of fifteen pounds to the square inch, the reason why we were not at once crushed by the weight; but this is, as I before explained, because the air presses in all directions with the same equal force, and hence there is an equilibrium. This is a most important element, and one that requires to be known, and also that the air never presses more than fifteen pounds to the square inch.

The next quality of the air is elasticity. Press it to make it occupy a smaller space than it otherwise would, and then take away the weight, and it comes back and occupies its original space. The lecturer then explained that in the air there were two gases; one oxygen, which is that part of the atmosphere by which chiefly we live, and which is the one-fifth part; and the other nitrogen, which is four-fifths of the atmosphere. Oxygen supports life and combustion, and nitrogen restrains its effects and dulls its operations. The quantity of air which a person consumes depends in a measure on one's self, and by training can be made more or less. The tailor and shoemaker take little in comparison with the laborer, and the public speaker or singer, or those who cry commodities for sale through the streets. A man in good health makes eighteen respirations in a minute, and in twenty-four hours consumes fifty-one hogsheds of the air.

As the oxygen which supports life is so small, we ought to be very particular how we permit other gases to mix with it and vitiate it. The blood when it enters the lungs, is black, but when the oxygen acts on it, it becomes red, and sends it through the veins to impart life and animation. This black blood is produced by carbon, and imparts the blackness which we see in the face of persons who lose their lives by suffocation, because the air was not allowed to reach the lungs to purify it. When we send out the air from the lungs we do not send it in the same manner, as we inhaled it, for when exhaled it is as deadly a poison as arsenic or corrosive sublimate. The lecturer showed this by experiments, and filled a vase with his own breath in which a lighted candle would not live. It was such air as killed persons who went down into wells in the country, or who died when a pan of charcoal was placed in a room. The danger of taking impure matter into the stomach was not so great as into the lungs, for the stomach had power to eject impurities which the lungs had not. Beside the impure air which we exhale there are 2,800 pores on every square inch of the surface of the body, and to a body of large size there are 2,590 square inches; and these multiplied make 7,000,000 of pores. There is a sort of drainage pipe in the body, which sends out matter as well as gas, and this pipe is calculated at twenty-eight miles long. The particles of matter which are sent out and which do not dissolve, are so numerous, that in China, where the houses are low, and a great many persons are in the habit of assembling in one room, it has been discovered that, after fifteen or twenty years, these particles adhere to the ceiling of the rooms, that the farmers will contract to put up a new ceiling if they are allowed to take down the old one, so valuable has it been found for manure.—*Scientific American*.

ROOTS.

Roots are divided, botanically, into three grand divisions, or classes, viz.: Annual, Biennial and Perennial.

The first embraces all such as exist but one year. They are produced from seed, sown in the spring, and survive only to maturity. Of this class are pears, beans, cucumbers, &c.

The second, or biennial, as the name indicates, live two years. The first season they produce no flowers, but infloresce the next summer, and the roots, as soon as the seed has matured, die. The cabbage, onion, beet, carrot, parsnip, turnip, are biennial. If these are reset in the soil in the second year, they will produce flowers, the petals of which will fall, and the germ proceed rapidly to perfection. This is supposed to exhaust the vital principle of the plant, and the root having performed its office, and accomplished the great circle of vegetable mutation, dies, and no power can again restore it to life.

Of the perennial class there is a vast number, as for instance, the rose, geranium, asparagus—likewise trees and shrubs. The existence of these is prolonged indefinitely. The effect of climate

and culture on the duration of vegetables, is very remarkable. Many of the perennial plants, by transplanting, are transformed into annuals, if the change is from a warmer to a colder climate. The common *nasturtium*, which, in South America is perennial, in the gardens of North America is an annual. Other instances of a similar mutation might be named.

For the New England Farmer.

FORCING THE GROWTH OF TREES.

MR. BROWN:—Your Wisconsin correspondent, June 28, has replied to one of the objections to high cultivation of apple trees, which is duly appreciated. There are several others to which he has not replied, and which are quite as objectionable as the one he has selected—one is, the danger of being injured by the cold winters. We had, in this region, nursery trees very hardly dealt with in the winter of 1851—2. Some trees which I took from a nursery were injured, some entirely killed, others but part way down, and started out from the roots; since, many more were affected in the same manner that were left in the same nursery. A little harder winter would have swept the whole of the Baldwins from the nursery and orchard too.

A distinguished pomologist said to me yesterday, while looking at some trees, for which he had taken the first premium, some two or three years ago, that he should lay the ground down to grass and only keep cultivated about six feet square about the tree; he said he was afraid of the cold winters.

Probably a medium between very high cultivation and total neglect, would be as sure a course as any to pursue with trees.

I suppose we may manage a tree in such a manner as to make it grow the fore part of the year and not the latter part. In this way the wood that made in the early part of the year would get so hardened as not to be susceptible to cold.—This may be done by keeping the grass and weeds from growing the fore part of the year and neglecting them the latter part.

I think that a tree will come forward fast enough in this way without applying any manure to it. Some that I set out last year grew from the bottom, above the budding, from two to four feet. They were not in cultivated ground where corn was planted, and they have grown quite as well this season, the land being in Indian corn again. We think with your western correspondent, that the question of high or low cultivation is an important one, and we should be very happy to hear some remarks from the editors of the *New England Farmer*.

Topsfield, August 8.

REMARKS.—We think the opinions expressed above are worthy of being put in practical operation. We see fine trees every spring, even when the winter was as mild as the last one, injured by the cold, and this happens invariably among trees under a high state of cultivation. We cannot say more now, but shall be glad to refer to this subject at some other time.

For the New England Farmer.

WHY DON'T THE FARMERS OF MASSACHUSETTS RAISE WHEAT?

MR. EDITOR:—The question I have asked is, I think, one of importance, and I should like to have it answered if it can be. If any one should say they cannot raise wheat, I with all respect would say, I think they are mistaken. Wheat can be grown as well as rye and it requires but little more attention; some may ask how I know this; I would reply by saying, that I know by experience, for I have raised it one year, and a near neighbor of mine has raised it this year with good success. For some four or five years I have had a desire to try wheat, but my father and others said it was folly to do it, it would not grow; but I was not satisfied until I had tried it. Two years ago this month I procured one quart of "Blue Stem" Winter Wheat, of Ruggles, Nourse, Mason & Co., and sowed it on a dry, gravelly piece of land on which had been put a small coat of compost manure consisting of horse manure, night-soil, and meadow-mud. The season was very dry, and it did not grow tall but it headed out well without any appearance of rust, insects, or anything else to injure it; the product of that quart was one bushel of as handsome grain as I ever set my eyes on. This I call a great yield. I sold half of it for seed for one dollar twenty-five cents, and saved the rest to sow which I did not do last year, as I intended, but mean to do this week. The above is the result of sowing wheat with me; now for my neighbor's wheat. He sowed three pecks of seed, on half an acre of tolerably good land, though more or less overrun with witch-grass; put on a cord and a half of barnyard manure, sowed his wheat late, the 7th Oct., and it did not spread as it would had it been sown earlier; the land had produced a stout crop of corn which was taken off to make room for the wheat. Now for the result; in the first place, the straw was stout, standing up straight five and a half feet, very even over the whole field. Secondly, the yield was fifteen bushels of wheat handsome enough to bring two dollars a bushel to sell again; judges of wheat said they had never seen better; this was the same variety that I sowed. The half-bushel I sold last fall to an Irishman who sowed it on a quarter of an acre of land, and sowed it very late, the 15th Oct., without manure, where a crop of potatoes had been raised: the straw was stout, the grain very plump and handsome, and as for the number of bushels, I don't know, for he has not threshed it yet, but I think there will at least be seven.

It will be seen by the above experiments that there is no difficulty in growing wheat, at least the variety spoken of, which I think is as good as any I have ever seen, for it is a hardheaded wheat and better to handle on that account; it is a white wheat and makes white flour, and then is so easily grown. I have heard from different parts of the State, where this wheat has been tried, and it has uniformly done well. The "White Flint," is a favorite variety in some parts of the country, but I have never tried it and don't know how it would do. A few words now in regard to Spring wheat. Three years ago, I sowed a quart of "Italian" Spring Wheat and it rusted so bad that I did not get one good kernel. One of my friends sowed half an acre and it did tolerably well, for he got about eight

bushels. I think it is of little use to sow Spring grain, either wheat or rye, for it never amounts to much.

If any one should still say they cannot raise wheat, I would reply that the only reason is you won't try: for I feel confident that we can raise as great or greater crops on an average, than they do in Genesee Valley, which has been celebrated for its good wheat. I further believe it may be made as profitable a crop as may be grown; and I also think that any person who has ever eaten fresh ground flour from northern wheat, and knows how much sweeter and better it is than the flour brought from the West, will, if he can, raise his wheat, so that he may avail himself of one of the greatest luxuries that a person ever enjoyed, bread from fresh ground northern wheat. Now, good friends, in conclusion, let me advise you to sow some wheat this fall do it immediately, before the middle of September if you can, for it will do better, though as I have shown, it will do later. The seed is not very plenty, but I think it can be had at some of the seed stores. J. F. C. H.

Newton Centre, Sept. 6th.

ENTOMOLOGICAL DISCOVERY.

The following note from our friend, Mr. S. Maxwell, Jr., describes a discovery he has made which will prove of considerable value, on account of the ease with which the nit is removed. We have examined a number of plums since receiving the note and find in every case the nit under the brown speck, except where the puncture has exuded gum—then the worm is hatched out and has commenced his depredations.

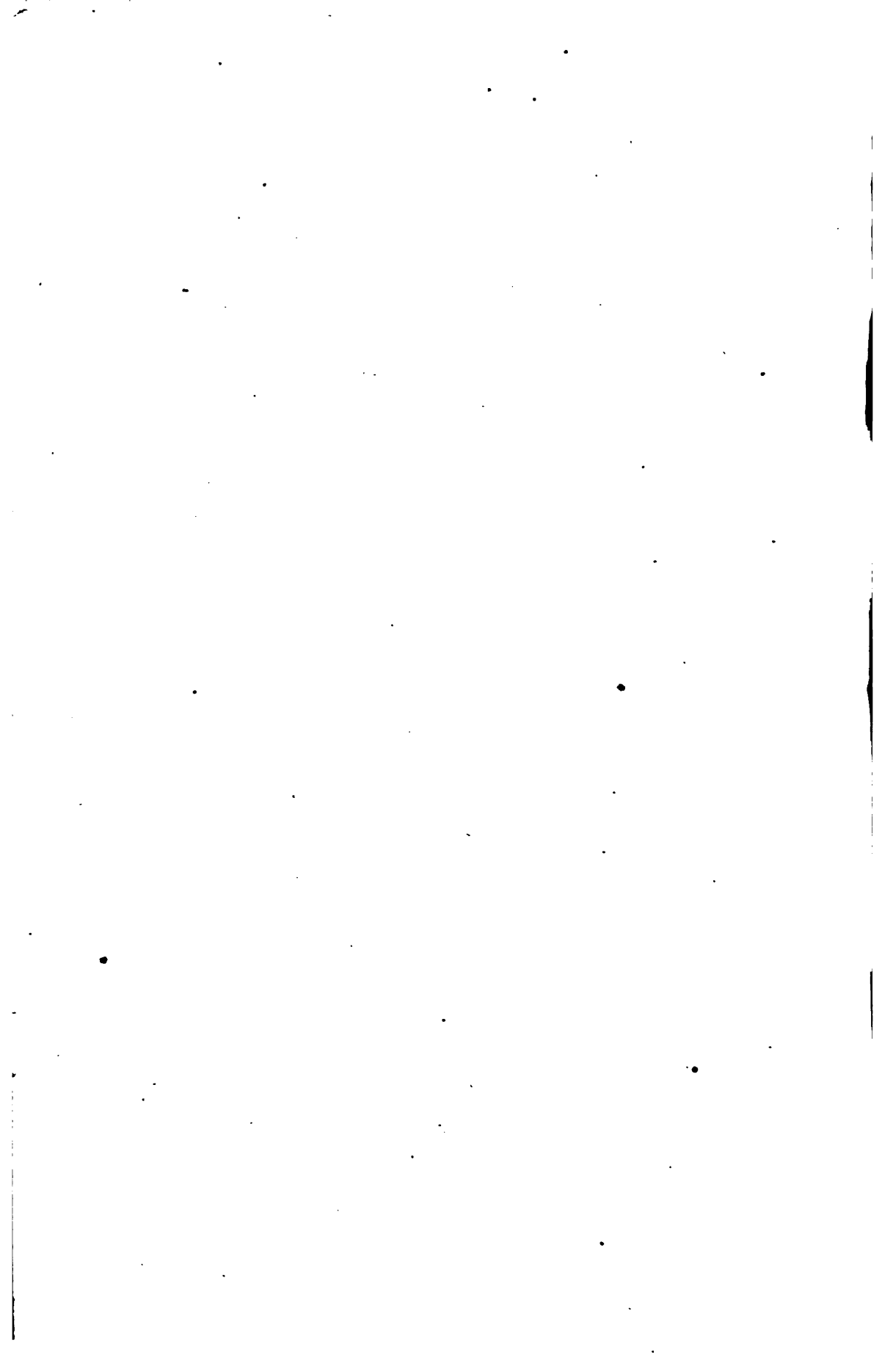
CURCULIO.—I have within a week discovered a fact about the curculio which was new to me, and have also found it entirely new to others to whom I have communicated it. All those who have had fruit bitten by the curculio, have probably noticed a little brown spot on the inner edge of the crescent-shaped puncture. That little brown spot covers the egg left by the bug, and the puncture seems to be made for a place of safety for the young worm when hatched, and also to facilitate its operations in boring into the fruit. Persons having plum trees, and leisure, and wishing to preserve a few of the fruit after it has been bitten, can with the point of a penknife, or with the thumb or finger nail, easily remove the spot from its place, and no harm will come to the fruit except the scar left by it.—*Greenfield Republican.*

REMARKS.—This will certainly not be new to many persons, having been successfully practised for many years. It is a slow and tedious process, and can only be done by those having little or nothing else to do.

DRYING TOMATOES.—The *Ohio Cultivator* says, (early last summer,) "We ate some very fine tomatoes not long since, dried in the following manner: Fruit fully ripe was scalded, strained through a sieve, slowly cooked half an hour, spread on clean plates, and dried within an oven, the whole process requiring about two days before the fruit was ready to pack away."

[Entered according to Act of Congress, in the year 1853, by Hovey, Norton, Mason & Co., in the Clerk's Office of the District Court of Massachusetts.]

DEEP TILLER NO. 77.



For the New England Farmer.

FLOW DEEP TILLER, NO. 77, AND DEEP FLOWING.

Mr. Brown:—I was well pleased with your comments in the *July Farmer* upon the great plow, No. 77, and its performances at Lowell and Ipswich. Probably for deep and difficult work, this plow stands unrivalled as the king among plows. The enterprising manufacturers merit the thanks of the farming public for the introduction of the Deep Tiller—a plow, in my opinion, calculated to add much to the productive value of land in certain cases, such as where recently-drained bogs and swales are to be broken up and made subject to refined cultivation, or where tamer lands are ready for deep tillage. Plows are plenty enough that will lay furrows six or seven inches deep, about as well as it will probably ever be done; but those of us who wish for deeper plowing, know well the vexation attending our attempts to practice it—particularly if the land be difficult sod—with the plows we can generally procure. For the benefit of those farmers who favor deep tillage, but have not an instrument to effect it with that suits them, I will now particularly describe this plow and its work.

Deep Tiller, No. 77, is bold and grand in its outlines, and yet shows you at a glance that the artist's "line of beauty" is pleasing and graceful in the plow, as well as in works of art and taste, strictly so called—that the beautiful and the useful may be combined in our agricultural implements. This plow is equal to the overturning of furrow slices 12 inches deep by 18 to 20 inches wide, in the most difficult soils, where the sod is composed of the roots of brakes, water grasses, and other wild herbage. Its range of excellent practical work may be stated at from 8 to 13 inches deep by 16 to 20 inches wide, though perhaps its very best work is 10 to 12 by 17 to 18 inches.

The mould-board, moderately concave, is constructed upon accurate mathematical principles, and has an equality of curvature and harmony of proportions throughout, a combination of curved lines and planes, which present an equal bearing against the furrow slice, so that the entire working face of the mould scours bright, and takes a high polish in any soil. When my Deep Tiller came to me new from the factory, the mould was coated with blue varnish; and when put at work, I noticed that the varnish was entirely scoured off the third round in plowing. The mould-board so effectually twists its furrow-slice as to mellow and disintegrate the overturning earth, breaking open any undue cohesion of parts, while the same is so equally done as to leave the plowed land lying even and regular, and in a fit condition for the raising of a fine deep tilth.

The share and forepart of the mould, attenuated and gently rising, form an easy wedge to enter the ground and separate the slice on the under side from the unplowed land, and to present the slice to the twist or curvature of the mould-board with so little friction, that a great work may be done by the plow without the necessity of employing an inconvenient amount of team; and it proves in practice that four good oxen will work the plow in yielding easy soils, or six in those that are stiff or boggy.

The length of the mould-board, measured in a straight line from the upper corner of the wing in the rear to the point of the share, is 4 feet and 4 inches. The extreme width of the mould, measured at its upper corner in the rear and at right angles to the plane of the landside, is 25 inches, and its height at that point is 18 inches. The length of land side is 3 feet. The height of the standard, or from the ground to the under side of the beam where it is bolted to the mould, is 19 1-2 inches, which enables the plow to swim clear through tall grass or other clogging substances. The length of the beam, from the standard bolt to the fore end, is 4 feet; and the height at the under side of the end of the beam is 19 inches; which enables one to adjust the line of draught so that the team may be brought near the working or body parts of the plow. The length from the standard bolt back to the end of the left or beam handle, measured in a straight line, is 5 feet, which gives the plowman a long handle, and powerful leverage for the control of the great plow in its great work. Then, too, the various parts of the plow are made of selected material, of a quality combining lightness with adequate strength, in order to dispense with all superfluous weight, and adapt the instrument to the control of plowmen of "fair to middling" size and muscular power. A large light wheel is attached to the land side of the fore end of the beam, and is set pretty well off to land, so as to operate as a brace to neutralise any undue side-pressure of a great slice, when plowing stubborn bog or swale sod, and to facilitate the plowman's labors in keeping a true course through such land. The plow is rigged with a draft rod and quadrant clevis—very strong adjustments, and affording the means by which the plowman may gauge the plow to any desirable depth and width of work, and have the line of draught such as to give the instrument a level run on its sole-bearings.

There is one result produced by the Deep Tiller, which I do not know as I can describe intelligibly, but I will try. The plow, in the act of twisting and inverting its deep slice, mellow it very much; and a portion of those parts that are not held together by the roots of the sward, roll down into the channel, forming a slanting side to the inverted slice; upon this inclined base the next slice is deposited, and so on—the edges of the inverted slices, from the top down, say half way, or as far as they are preserved entire by the roots of the sod, being matched in side by side; so that while the sod is buried sufficiently to be out of the way in after-cultivation of the plowed land, and to smother and kill the vegetation attached to it, the surface soil is not turned entirely to the bottom, but is mixed in layers with the under soil—a part of the latter being below, and the rest above the surface soil. This is regarded as an excellent result, especially where one wishes to deepen his plowing, and to improve the subsoil; but does not want too thick a layer of it on the surface at a time, if it be quite unfertile.

I would like to show you, friend Brown, a field of nine or ten acres of recently drained swale land, which was broken up a foot deep with this plow last November, and from which a crop is now being harvested. The land is a part of a low meadow,—not of peaty soil, but a stiff, heavy loam, approaching in texture to clay,—subject to

an annual overflow by the high freshets of the Connecticut river, and with a small stream and springs passing through it, which, before being lowered from the surface by the drains, made the land cold and wet. Water grasses and other poor herbage had pretty general habitation on the land, and had held possession nobody knows how long. The land was ready for the plow before my Deep Tiller came to hand, and a commencement was made with the largest plow that could be obtained here. This plow worked about nine inches deep pretty well, except in the more stiff and swaly places, and there it had not power to stand up straight and manage the tough sod properly. But when the No. 77 was put to work, it readily turned the swale over in furrow slices 12 inches deep by 18 to 20 inches wide. The Deep Tiller going mostly below the roots of the sward, separated the furrow slices from their native bed and completely inverted them; but the other plow had to struggle with the coarse, wild roots, too near the surface, where they were larger and more firmly placed, and often failed of inverting the sward. In June last, a good coat of manure was spread over the surface and harrowed in; then the land was cross-plowed about 4 inches deep, and a fine seed bed was made. Oats were sown for fodder, together with grass seeds for future mowing. The oats are now being mowed and made into hay, and the burden is enormous. The grass has come well, and it now appears probable that abundant crops of good hay may hereafter be taken from the land. It is calculated that the Deep Tiller has already much more than paid for itself, by its efficient service in the improvement of this land. Indeed, for the next operation after draining such land, I know of no instrument so valuable as this plow.

I would also like to show you a neighbor's corn field, a deep fat soil, a part of which was broken up from grass a foot deep with my plow, and the remaining part with another plow at a less depth—the manuring being alike in quantity on all parts, and the cultivation also, with the exception of the plowing. The season here, up to about the first of August, has been pretty dry, and the crop upon the deep furrows has evidently quite an advantage over that upon the shallow ones. The ranker growth and deeper green color of the former, in contrast with the latter portion of the crop, are quite observable, and the line through the piece where the two plowings unite is quite apparent in the crop.

It is a noble and pleasing sight to observe the Deep Tiller at work—for instance, in a stubborn bog or swale, and notice how bravely and firmly it stands on its bearings, twelve inches deep in the ground, overturning its huge slices in a majestic and finished manner, and leaving the plowed land in a fit condition to yield a fine tilth to the harrow or other instrument, and a deep seed bed, where the roots of cultivated crops may range at will.

Whenever my great plow is put at work, either on my land or that of my neighbors, I contrive to get hold of the handles for a while, if other engagements will possibly permit, and feel as well satisfied with the employment, and that this old world of ours is generally wagging about right, as I ever do in any place or employment. Having held the No. 77 myself in various kinds of land, I can confidently commend it to those persons who have wet or stubborn lands to reclaim, or such

more feasible soils as are ready for a deep furrow. F. HOLBROOK.

Brattleboro', Aug. 10, 1853.

THE FARMER'S DAUGHTER.

She may not in the merry dance
With Jewell'd maidens vie;
She may not smile on courtly swain
With soft bewitching eye;
She cannot boast a form and mein
That lavish wealth has bought her;
But ah! she has much fairer charms,
The farmer's peerless daughter!

The rose and lily on her cheek
Together love to dwell;
Her laughing blue eyes wreath around
The heart a witching spell;
Her smile is bright as morning glow
Upon the dewy plain;
And listening to her voice we dream
That spring has come again.

The timid form is not more wild,
Nor yet more gay and free,
The lily's cup is not more pure
In all its purity;
Of all the wild flowers in the wood,
Or by the crystal water,
There's none more pure or fair than she,
The farmer's peerless daughter!

The haughty belle whom all adore,
On downy pillow lies,
While forth upon the dewy lawn
The merry maiden hies;
And with the lark's uprising song,
Her own clear voice is heard;
Ye may not tell which sweetest sings,
The maiden or the bird.

Then tell me not of jewelled fair;
The brightest jewel yet
Is the true heart where virtue dwells,
And innocence is set!
The glow of health upon her cheek,
The grace no rule hath taught her,
The fairest wreath that beauty twines
Is for the farmer's daughter.

For the New England Farmer.

TALL CORN.

MESSRS. EDITORS:—Gentlemen,—I have noticed in several of our agricultural papers descriptions of "tall corn," some of which, it was said, had obtained the height of eight feet three inches.

Having occasion to visit Camden, Maine, quite recently, I saw a piece of corn upon the farm of Hon. JOSEPH HALL, at that place, some of which, upon due examination, measured upwards of nine feet, and the general average of the entire lot was more than eight. This corn was planted upon reclaimed land that but two years since was a wild pasture.

Should you ever visit the vicinity of Camden, it would be well worth your while to make Mr. Hall a visit, and to examine not only the present prosperous appearance of his farm, but also to note the extensive and varied improvements he has made thereon since it came into his possession. He removed from this city in the winter of 1850, and by persevering industry, joined with a thorough practical knowledge of agricultural pursuits, his land has been benefited and has greatly advanced in value. Mr. Hall is very industrious, and takes

a noble pride in all that pertains to his occupation; and if he continues the same course of farming, I confidently predict that his will be the model farm of the eastern part of Maine. VERITAS.

Boston, Aug. 22d, 1853.

For the New England Farmer.

POTATO DISEASE.

TO THE EDITOR OF THE FARMER:—You and your readers must be heartily tired of seeing the above caption. Among the hundred certain remedies which have been prescribed, I believe all have proved failures. I will state facts, and leave all to make their own conclusions.

It was first noticed here generally in 1845. In other portions of the State it had before been severe. That year the disease attacked them after fully grown and ripe. Had it been understood, most of the crop might have been saved; while, without any knowledge, nearly all were lost. All sorts of experiments, as mixing lime, &c. with them, were tried without success. The spring following I carried from my cellar more than one hundred bushels, and spread them on less than ten square rods of ground—soil, a secondary formation of coarse gravel—one mile from, and two hundred and fifty feet above the Lake, (precisely the same soil as they grew in.) They were spaded in, and having some parts not wholly decayed, they grew; were thinned and cultivated, producing some twenty bushels; were dug late in the fall; put on the bottom of a warm, damp cellar, with others above them; taken out in May following perfectly sound.

Does any one want stronger proof that the disease is *not* in the potato or the soil?

Another season I had given special directions to my farmer to keep close watch of his potatoes, and should they be struck with blight to pull the whole at once, leaving them in the hill as they grew. I was absent some weeks, and instead of watching the tops, he daily pulled a few hills in the wettest part of the field for a week, and finding all sound, neglected it. He soon after found they were rotting badly. The hills pulled, (about 100,) scattered through the lower part of the field, were found perfectly sound, and the others near them entirely worthless.

Some three or four years since, I noticed the disease had just appeared when potatoes were ripe, but tops perfectly green. Knowing a widow lady who had planted an acre and had a large crop, (more than three hundred bushels,) I immediately called on her; found the whole struck with blight where, one day previous, to my certain knowledge, there was no symptom of it. I told her to have the whole pulled immediately, which was done within six hours. They were dug during the following week, spread in dry places, and the whole saved in good order. One row, left for an experiment to satisfy her father, (an old gentleman of more than seventy years of age,) accidentally present, in ten days were perfectly rotten in the hills.

A favorite theory has been that the potato has run out, and that we must produce new ones from seed. Facts have shown that the new sorts have been most liable to rot. Have not experiments and facts fully demonstrated that the disease is atmospheric, and that no precautions can produce

any effect further than they change atmospheric influence? Also, that after the potato is grown and ripe before struck with disease, if they are promptly attended to by pulling or cutting the tops on its first appearance, the entire crop may be saved, when a few day's delay may cause a total loss. C. GOODRICH.

Burlington, Vt., Aug. 13, 1853.

TRANSACTIONS OF THE NEW HAMPSHIRE AGRICULTURAL SOCIETY.

A volume has recently appeared from the press of Butterfield & Hill, Concord, N. H., that deserves more than a passing notice. The typographic and artistic execution are highly creditable to the press from which it has issued, and to the taste of the committee who had the oversight of its publication. This volume contains the transactions of the State Agricultural Society, for the three years of its existence, and although it does not equal in size the more ponderous tomes of some other States, yet we look upon it with much interest, as the commencement of a series of publications that are destined to take an honorable place in the agricultural literature of the country, and to exert an important influence upon the prosperity of the granite State. New Hampshire has a hard soil, which is more remarkable for the production of noble men, than of luxuriant vegetation. Its early settlers were principally employed in lumbering, trading and fishing. But for two generations past, at the present time, and for all future time, agriculture has been, is, and must be the leading occupation of its inhabitants. We are glad to see her people stimulated by the doings of sister States, especially of Massachusetts and New York, imitating their example and walking in their steps. Years ago they took them for their pattern, in the matter of education, and now, in a similar spirit, they are taking hold of the work of agriculture. Although a majority of her legislators have ever been farmers, and all of them have been elected by majorities of farmers, yet they have ever extended a reluctant and parsimonious hand to aid the most important interest of the State. But although the government has done but little, comparatively, a healthy public opinion has been forming, individuals have been industriously at work. Gov. HILL accomplished a good work through the columns of his agricultural paper. A large portion of the State is better suited to grazing than to any other culture. Hence we should naturally expect her people to be greatly interested in the raising and improvement of stock, and much has in fact been done in this direction. The example of New Hampshire's most eminent son upon his farm in Franklin, as well as that of many of her most intelligent citizens, has not been without influence. The products of the dairy have been greatly improved within our own recollection, both

in quality and amount. We remember that a young and enterprising son of New Hampshire, then residing in Boston, some twenty-five years ago, printed at his own expense, and circulated through the State, a sheet of plain and simple directions for making and preserving butter. Upon that sheet it was stated that more than fifty thousand dollars were annually lost to the State, for the want of proper attention to this most important farm product. At that time, the butter of New Hampshire was considered quite inferior to that of Vermont. Agricultural papers from other States have found their way into the State. Some ardent friends of the cause have been assiduously engaged in its promotion for many years. Some four years ago, public opinion appeared to take a long stride in advance of its former position. The value and importance of associated effort, as applied to this subject, seemed at once to become apparent to the farmers of the State. In 1823, Gov. WOODBURY, with a spirit worthy of the good name he left behind him, recommended to the Legislature to make an appropriation for a geological survey of the State. Some curious remarks were made in the House, when this portion of the message came under discussion. One man thought, *agricultural shows exhibited many things too small for gentlemen. In his part of the country, farmers already knew more than they could practice.* Another said, that for the Legislature to vote away the public money, to encourage men to take their oxen twenty to thirty miles, fasten them to heavy loads, and beat them unmercifully, for the sake of a few dollars and the amusement of the lookers on, is what our constituents, who earn their money, will not justify or sanction. Voting money for such a purpose, is encouraging cruelty, immorality and dissipation. But those days went by, and the Legislature appropriated money for a survey of the State. This was completed by that distinguished geologist, Dr. JACKSON, and his report, which has been freely circulated through the State, has been one important means of awaking an interest in the science of agriculture. The Legislature should be cheerfully credited with all it has done. It has from time to time, afforded aid to the County Societies, and the last year it consented to publish the transactions of the State Society, as a State document, and in consequence of this consent, this volume has seen the light. This we believe, is all the aid which it has afforded to this Society. We trust it will not be long before their legislators will imbibe more largely the spirit of the age, and no longer dole out their aid with a niggard hand to this, the most important institution within their borders. In Dec., 1849, the State Society was organized, and the Hon. G. W. NICHOLS was placed in the President's chair. In the month of June following, a series of agricultural meetings was held in the State House at

Concord, and an act of incorporation granted to the State Society, but no appropriation was made to give vitality to its movements. But noways discouraged, they undertook to get up a State Fair at Concord, the following October, and considering it was the first attempt, their success was admirable. The range of premiums was unusually wide, and by no means confined to the products of the farm. A variety of mechanic arts, the products of the loom and the needle, came in for their full share of encouragement. This was no doubt judicious, for by this means all classes were interested in promoting the success of the exhibition.

In the June following, a convention was held at Concord, of delegates from the State Society, and the several County Societies, to consult on the condition and necessities of agriculture in the State, and to propose some plan for its relief. This meeting was followed by a meeting of the members of the State Society at Concord, on the same month. The Legislature was again memorialized for aid, but with the same result as before. The annual fair was held at Manchester, in October, and the exhibition of stock, and the display of the products of mechanical skill were very fine. But the striking features of the occasion, were the presence of DANIEL WEBSTER, and the address of M. P. WILDER, two of New Hampshire's noblest sons. Mr. Webster was greeted with an enthusiasm alike honorable to him, and to the thousands of his native State, who were gathered around him, a large majority of whom will remember that as the last time on which he stood before them. Taken in all its parts, the exhibition during those fine October days was one of the most glorious events that ever occurred in New Hampshire. In 1852, the agricultural discussions were continued during the session of the Legislature; at this session the Legislature passed the resolution authorizing the publication of the transactions of the Society, to which we have already referred. The annual exhibition was held at Meredith Bridge, and in respect to fruit especially, appears to have excelled that of the two former years. In some respects we should infer from the report that the exhibition scarcely came up to the standard of the previous year. The premiums were very numerous, and embraced a wide range of objects. They were bestowed with a liberal hand. The report for this year is well written, and together with the essay of Dr. McFARLAND, upon Draining and Subsoil Plowing, of H. F. FRENCH, Esq., upon Fruit Growing in N. H., and of Prof. HORT, upon Orchard Culture, in connection with the laws of vegetable growth, constitute about half the volume. The essays above referred to are all highly creditable to their authors, and deserve a place upon the table of every farmer in New England. They are worth more than the cost of the whole volume. We hope the practice of giving premiums for the

best essays will be continued, and will be adopted by other societies more generally. It will create a species of literature, that will be useful not only to the rising, but to the risen generation. The plan of occupying three days in the annual meeting of the Society, adds very much to the interest of the occasion. There is then no excuse for hurry, bustle and confusion, but all goes on with order, deliberation and system. These *protracted meetings* of the dwellers among the hills and valleys, who see but little of each other during the year, are not only pleasant but highly useful in many ways which we cannot now specify. Our remarks have extended to a much greater length than we intended, and we cut them short with the wish—that when the fair women and the strong men of the Granite State come together at Manchester, to hold their annual festival, may we be there to see.

For the New England Farmer.

"EXPERIMENTAL FARMING" ONCE MORE.

THE PASS.

MESSENGERS. EDITORS:—I find in the July number of the *Farmer*, that your correspondent, Mr. Silas Brown, of Wilmington, asserts that I criticise the communication, "Experimental Farming," with a home thrust and make a pass at his friend S. F., of Winchester. If asking a few questions of one whose opportunities for observation have been more extensive than mine, is making a pass at a man, I am guilty of that frequently, and if Mr. S. F. will answer those questions fairly and fully as Mr. J. G. Chandler has one of them on page 278, June No. *Farmer*, he will reflect more light upon practical agriculture than will be likely to be received from all these scribbles on experimental farming.

I noticed his carefully adjusted armor, but there appeared to be places where a bow drawn at a venture might perchance lodge an arrow between the joints of his harness; yet to try to draw out the practical information which his opportunities for making observations on the growth of crops, &c., in different parts of the country, seemed so well adapted to enable him to give, promised more immediate profit than open hostility.

THE OPINION.

But let us return to friend Brown, who says that he has yet to learn how J. is going to defend himself in his opinion and by his spirit of controversy against the results of the experiments of our best practical chemists. Here let me state once for all, that *I intend to do no such thing*. My opinion has been established upon the authority of just such men as he refers to. Indeed, my limited knowledge of the chemical analyses of soils, my confidence in the importance and value of the same, have each been derived from our best practical chemists. The writings of Prof. Johnston, Mapes and Norton, Dr. Dana and others,—not excepting some of the contributors to the *N. E. Farmer*; see Vol. 1, p. 389—in entire volumes bearing their names, and in communications to various agricultural journals, have for several years

beguiled much of my leisure into hours of pleasurable—and I had fondly dreamed profitable—study, and have done much towards influencing me to abandon my mechanical occupation under the impression that a wider field was open for the study and application of the sciences in the pursuits of the farm. But just as I had begun to fancy myself established in the element of scientific agriculture, Mr. Silas Brown, an *experimental farmer*, informs us that chemists themselves have acknowledged the imperfections of chemical analysis of soils as applicable to practical purposes in agriculture.

SPECIAL ACKNOWLEDGMENTS.

Since your correspondent and his friend S. F. quote so largely from, and expatiate so freely upon, the confessions and acknowledgments "of chemists themselves," let us see if a few more cannot be extorted from them. Here is one from Prof. Johnston,—found in his Lectures on the Application of Chemistry and Geology to Agriculture, Lecture XIII: "Some persons have been led to expect too much from the chemical analysis of a soil, as if this alone were necessary at once to explain all its qualities, and to indicate a ready method of imparting to it every desirable quality, while others have as far depreciated their worth, and have pronounced them in all cases to be *more curious than useful*. The truth here as on most other subjects, lies in the middle between these extreme opinions. If you have followed me in the views I have endeavored to press upon you in regard to the necessity of inorganic food to plants—which food can only be derived from the soil, and which most vary in kind and quantity with the species of crop to be raised, you will at once perceive that the *rigorous* analysis of a soil may impart most valuable knowledge to the practical man in the form of useful suggestions for its improvement. It may indeed show that to apply the only available substances to the soil which are capable of remedying its defects, would involve an expense for which, in existing circumstances, the land could never give an equivalent return. Yet even in this latter case, the results of analysis will not be without their value to the prudent man, since they will deter him from adding to his soil what he knows it already to contain, and will set him upon the search after some more economical source of these ingredients which are likely to benefit it most." Now hear Prof. Norton,—Elements of Scientific Agriculture, p. 185: "The farmer must remember that all of the substances with which he has to do, all of the agents that are at his command, are connected in their composition and action with the fourteen elementary bodies, organic and inorganic, that have been described in this little work. If he preserves them, or if he adds them as manures in an improper form, his utmost exertions are of little avail; if in proper form, his land becomes fertile, and his returns all that heart could wish. If one is absent, the others may all be useless; if one is present too largely, the same effect upon the action of the others may ensue. How immensely important, then, and how directly practical is the knowledge of these elements, and of the immense variety of combinations in which they present themselves."—Prof. Johnston again. Lec. XIII, § 2: "The quantity of some of these substances which is necessary to plants is so very small, that nothing but a

redned analysis of a soil is capable in many cases, of determining whether they are present in it or not—much less of explaining to what its peculiar defects or excellencies may be owing—what ought to be added to it in order to render it more productive—or why certain remarkable effects are produced upon it by the additional mineral or animal manures.”

PRACTICAL RESULTS.

In the *N. E. Farmer*, Vol. 2, p. 386, is an account of an instance of the successful application of chemistry to agriculture, at once clear and conclusive, by which it appears that by the addition of an artificial manure at a cost of \$10 per acre, more than twenty-nine bushels per acre of wheat was raised on a field of ten acres, previously incapable of producing corn. But lest I should be thought to jump at conclusions wonderfully, in supposing that if Hon. Reverdy Johnson, near Baltimore, raised large crops, we can do the same here, I will drop this, and refer to another, nearer home; and not having noticed it in the *Farmer*, I will quote the principal facts as I find them in another paper.

“Mr. Wm. P. Dickinson, of Hadley, had a field of eight acres thoroughly grown over with moss. He procured an analysis of it by the late Prof. Norton, and was told that it was deficient in two or three ingredients which could be cheaply supplied. He plowed the field and treated it in every respect as Prof. Norton advised, with the exception of here and there a couple of rows, which were cultivated as he would have cultivated the whole if he had not been advised otherwise. The result is, a crop of corn now in the field equal to perhaps twenty bushels per acre where cultivated in the old way, and very nearly fifty where cultivated as Prof. Norton advised. Mr. D., after keeping an exact account of the expenses, gives it as his deliberate opinion that the increased profit in consequence of Prof. Norton's advice is at least fifty dollars this year, and besides this, he has better hopes for that land hereafter.”—*H. and F. Express*. The names of the farmers being given, Mr. Brown may in these instances know who raised large crops after having their soils analyzed; but lest these results of one year's trial of particular ingredients as manure should not satisfy the most of us, I will quote from the *Plow*, p. 254, a few lines of what an eminent professor of chemistry says of their use in England: “Scarcely anything has accelerated the progress of agriculture so much as the introduction of artificial manures. By means of artificial manures the produce of this country has been considerably augmented; new crops have been introduced into the usual rotation, and land so sterile that it would not repay the cost of cultivation in the usual way, has been forced at once to yield remunerative crops. Even supposing the land to be in such a condition as to yield the maximum return which the usual rotation of crops is capable of furnishing, the extra command of artificial manures would still materially increase the profits of the farmer, as it would enable him to dispense with those crops which are less remunerative, and to replace them by others which require a larger dose of manure, but which also yield a larger profit.—These facts, says the editor, are equally true and applicable to the business of farming in this country as in England.”

THE FLIGHT OF FANCY.

In the still too common mode of culture, where the common plow has been run but a few inches deep, and that in a manner and at times well suited to form a hard division line between the soil and the subsoil, so that crops were drowned by rains, or scorched by drought, no doubt much depends upon a favorable season. But let us look around and see if the buds of promise already beginning to open, do not plainly foretell “a good time coming,” when, by adopting a good system of draining—by the timely and sufficient use of such implements as shall be found to bring both the soil and subsoil into the best possible condition for the growth of the desired crops—by carefully saving the waste water from the farm house, as well as barn-yard, and applying it to growing crops in a more or less dilute state, according to the dryness of the season, by the encouragement of the growth of belts of hardy trees in such positions that they shall shelter tillage lands from both cold and drying winds, farmers shall not only be able, notwithstanding the ordinary changes of seasons, to secure good staple crops, but the results of out of doors experiments, conducted by scientifically practical men, shall approximate so closely to those in the laboratory, that intelligent farmers shall no longer look with any degree of distrust upon the recommendations of those who devote their entire energies to the study of the branches of science most applicable to agriculture.

SURFACE REASONING.

If your correspondent concludes, from my stating that I had supposed that what he calls surface soil was that which chemists and agriculturists had most to do with, that I also supposed that they had nothing to do with the subsoil, he must have suddenly adopted a very superficial mode of reasoning. Indeed, his changes of position are quite amusing. First, he plunges through “the soil at the surface,” as if it were of no account, and stops at an unknown depth to make observations that shall have a bearing upon practical agriculture; but being confronted there, we next find him as much above the common level as he had probably before been below; then quietly acknowledging the reception of instructions never given him, and yet unable to overcome his habit of going to the bottom of things, he plunges again into the subsoil to ascertain what the “surface soil” needs to render it fertile. Here truth may be found between these extremes; for, although it could hardly be said that in the ordinary mode of culture the soil depends to any great extent upon the subsoil for its fertility, yet the productive value of the farm will depend very much upon the character and condition of the subsoil. For this reason our best agriculturists are beginning to work it deeply and examine it thoroughly, some being at the expense of analysis, by which it is sometimes found to contain “all those mineral constituents in which the soil itself is deficient.”—(Johnston.)

THE RESTORATIVE.

It is not at all surprising that one who is so much of a conjurer as to be able to discover changes in soils beneath where the soil has been removed, and prescribe for exhausted soils a universal restorative, compounded of so many remedial agents that it shall not fail of supplying “the

deficiencies which are required to constitute a good soil," should be able also "to form a better opinion, by examining the subsoil, what the surface soil needs to fertilize it, than a chemist would be likely to do by analyzing the surface soil." But to the uninitiated in the magic art, the following from the *Family Visitor* may not be uninteresting. It may be found in the *Journal of Agriculture*, Boston, July 2d, 1851, p. 21: "Science cannot long be despised as the mere speculations of theorists, but must be considered, by all ranks of men, in its true point of view—as the refinement of common sense, guided by experience, gradually substituting sound and rational principle for vague, popular prejudices. If land be comparatively unproductive, the sure method of determining the cause is—first, to ascertain the extra nature and relative qualities of the ingredients of the soil, (which can only be done by chemical analysis,) and then to supply the soil with the deficient materials requisite for the growth of such vegetables as it is best fitted to produce. The preparation of compost will only be of real use when materials which do not afford, singly, an efficient or convenient manure, are made to do so by their mixture. Every farmer has it in his power so to compound the best from his store of manuring materials, that the defects of his soil may not only be remedied, but that the crops may receive those substances in sufficient quantity which are required for their vigorous growth. To do this, however, it is requisite to know, not only the component parts of the soil, but also those of the crops. If these are not taken into the account, no clear idea of the composition, much less of the action of manures, will ever be obtained; and many substances of real value will be tried, and, from misapplication, tend to useless if not injurious results." One word more, and I leave this; a man with whom I was at work the other day in the hay-field, and conversing upon the subject of experimental farming, suggested the following query: viz., If Mr. Silas Brown can ascertain, by examining the subsoil, what are "the deficiencies which are required to constitute" the "surface soil" a good one, can he also, by the same process, determine the presence and relative quantities of those mineral substances, which, when existing in excess, render a soil "productive of abundant barrenness."

THE PROPER APPLICATION.

In his first communication on experimental farming, your correspondent asserts that "all farmers know that clay with sand will improve the soil," and leaves the novice in agricultural pursuits to refer back to a letter of Prof. Mapes, on page 71 mo. *Farmer* for February, to learn the why and wherefore; and in his experimental farming, again he goes still deeper into the matter, and says, "experience has taught us that clay applied to the surface of a quicksand subsoil was a proper application; but how he is going to reconcile the remark that "no experienced farmer would apply it to an argillaceous foundation," with his recommendation of a "compound of every substance, vegetable and mineral, which would have a tendency to benefit any kind of soil," is one of the things which "I have yet to learn."

THE PROBLEM.

With my small capability of entering deeply into important subjects, I have but little hope of

attaining the exalted position in society which my friend B. holds up to view as an inducement to attempt the solution of his ingenious problem in relation to increasing the productiveness of ground by analyzing it; yet "I believe" that if the "soil at the surface" be carefully removed, and the soil be thoroughly dug to a depth of several feet and carefully examined, and a fair average sample selected for the chemist's use, which shall not represent the ground as deficient of any element of fertility, which, however absent from one place, may abound but a short distance therefrom, and the "surface soil," after the analysis is performed, returned to its former position and properly cultivated, the subsequent crop, of whatever kind it may be, will be of far more luxuriant growth than it would have been had no such analysis been performed.

THE DICTATORSHIP.

Farmers should not "be governed by the dictation of chemists of doubtful skill," neither should they rely entirely upon their own experiments, but should know enough of chemistry to understand the rationale of what is recommended, and be able to carry out an experiment in exact accordance with the directions given. Here let me bring in a few more testimonials, from Prof. Norton and others; and let those who prate of the "need of the creation or perfection of science for agriculture," as well as those who deem it a "difficulty approaching an impossibility that the best practical chemist can give directions to the farmer how to prepare his manures to suit his different kinds of soils, and fit them to produce different kinds of crops with any precision," whilst they recommend an indescribable compound of an almost endless variety of substances, cease henceforth to use the writings, or even the name of Prof. J. P. Norton, for the purpose of establishing their own retrograde theories. Elements of Scientific Agriculture, pp. 185, 187, &c.: "The farmer can annihilate nothing; he can only change the form of his materials; every study which will enable him to do this according to his wish, should be pursued eagerly and perseveringly. In order to know what is in a soil, and to determine what are the quantities of its constituents, an intimate acquaintance is necessary not only with the substances themselves, in their almost endless relations and changes, but with great numbers of other substances from which they must be distinguished, and with which they are likely to be confounded by an inexperienced person. Uninstructed persons must constantly be making mistakes of the most flagrant description. The worst difficulty of all is, that in many cases, not having knowledge enough to know when they have gone astray, they actually rely upon their own work as trustworthy, and lead others to do so too. The farmer who knows little or nothing of even chemical names, perhaps is not competent to judge of a good analysis; he cannot tell the difference between a pretender to scientific knowledge and one who really knows something that is true and valuable. He takes these erroneous analyses as his guide, and probably falls at once into some serious mistake, by attempting to alter the supposed constitution of his soil. After he has been disappointed in this way a few times, he is very apt to condemn all scientific agriculture as ridiculous, and of no avail for any practical purpose. What I wish to im-

press in this connection is the necessity of caution in coming to such a decision. There is truth in science, but it is not every one who can draw it out; and the proper course in cases of an unsatisfactory nature is to distrust the *man* and not the general principles." In a late No. of *The Working Farmer*, in an article on "Chemistry as applied to Agriculture," Prof. Mapes says: "Within the last few months a new set of objectors to Chemistry, as applied to Agriculture, seem to have arisen. The style of their objections is truly original; for they first admit that chemistry may be useful to agriculture when better understood, but that analysis cannot be depended upon as a guide for the amendment of soil; that farmers had better trust to experience than to science, &c."

We know hundreds of instances where farmers have applied in proper quantities and at less expense than the usual style of application, the missing ingredients to their soil ascertained by analysis, and in every case with increased profit in results. We also assert that a fair knowledge of Chemistry and Natural Philosophy, such as may be obtained by means entirely practicable and within the reach of every intelligent farmer, will enable him, with an analysis of his soil before him, to know not only what it requires to render it fertile, but also the means by which these requirements may be most economically furnished to the soil. It is too late in the day for an argument to be maintained that facts are to be arrived at by guessing more readily than by scientific research. Let those who would war with us on this subject, bring forward their facts instead of their satire, and we are ready to meet them. "In the *Cultivator*, (Albany) April, 1850, p. 232, is a little extract from Prof. Liebig's *Familiar letters on Chemistry*, which reads as follows: "If a farmer, without the guidance of just scientific principles, is trying experiments to render a field fertile for a plant which it will not otherwise bear, his prospect of success is very small. Thousands of farmers try such experiments in various directions, the result of which is a mass of practical experience, forming a method of cultivation which accomplishes the desired end, for certain places; but the same method frequently does not succeed—it indeed ceases to be applicable to a second or third place in the immediate neighborhood. How large a capital, and how much power, are wasted in these experiments! Very different, and far more secure, is the path indicated by science; it exposes us to no danger of failing, but on the contrary, it furnishes us with every guaranty of success."

In the *Cultivator* for Aug. 1850, p. 260, is a "Letter from Prof. Norton, No. 8," a part of which reads thus:—"I am convinced that practical men will remain in the dark on many of the most important points of agriculture, so long as they despise the aid of chemistry, and persist in solving inquiries connected with agriculture, by blind experimenting; by experiments I mean made without plan, or anything clearly defined or distinctly understood. If those engaged in such *random trials* would bear in mind that nature does not give a precise answer to an indistinct question; and if they would be candid enough to believe, in all cases in which an experiment has failed to answer their expectations, that the experiment itself, or the anticipated re-

sult, must be false in principle, and that consequently the fault is their own, and not on the part of nature—a great deal of good would be effected. Unfortunately, however, most men are as quick in condemning the value of materials used in a bungling experiment, as they are eager to praise and enthusiastic in recommending every result when the experiment proves favorable to their views; and when such an experimenter has some kind of theoretical notion in his head with which the experiment can be made to tally, the case is still worse. In this way a great deal of harm has been done, and the progress of scientific agriculture retarded instead of advanced, (Dr. Voelcker.) There is much of sound practical sense in the above remarks, and every person who has studied over the numerous unprofitable and wearisome discussions, which fill up many of our agricultural papers, will fully appreciate it."

PRACTICAL DEMONSTRATIONS.

But why does Mr. B. hope that J. will engage in the practical analysis of his soil, &c.? In my criticism of his experimental farming, I gave a specimen of the numerous practical demonstrations already made, accompanied by the name of a chemist whose writings and sayings are copied into almost every agricultural journal that has lately come in my way, but he coolly suggests that the successful result is probably attributable to other cause than that indicated, and acknowledges "little faith in reports of that kind where no responsible names are given." Of what use then can it be for J. of Bridgewater, away up among the Green Mountains, to attempt to make practical demonstrations thereby to enlighten those who though

"Convinced against their will,
Are of the same opinion still."

CONCLUSION.

If your correspondent will now bring forward his figures and responsible names, illustrating the results of our best practical chemists, they shall be duly considered; and I will endeavor to hold myself in readiness to satisfy him, that there are a few pages more of the writings of Prof. Norton, and others, which are not copied into this lengthened communication.

THE REVIEW.

One word more. Your reviewer in noticing my criticism says: "in relation to the writer's idea of the soil, I will remark that in digging my barn-cellar we came upon a stratum of gravel about two inches thick, and nearly two feet below the surface. Now, this same strata, or layer, crops out and becomes soil,—all there is of soil,—[?] some six or eight rods from the barn." It may be possible that the quick-sand and clay gravel encountered in digging his friend B.'s wells crops out somewhere and becomes soil but that either should be called soil, or any other earthy matter at a depth of two feet, as at any depth below where the "soil at the surface" had lately been removed, should be called soil, was unknown to me till within the present year. In Prof. Johnson's Lec. XI, § 4, he tells us: "In a mass of loose matter of considerable depth, spread over an extent of country, it is easy to understand how, even though originally alike through its whole mass, a few inches at the surface should gradually acquire different physical and chemical characters from the rest, and how there should gradually be established im-

portant agricultural distinctions between the first twelve or fifteen inches (the soil) the next fifteen (the subsoil) and the remaining body of the mass, which, lying still lower, does not come under the observation of the practical agriculturist. Thus the character of the soil is that it contains more brown organic, chiefly vegetable matter, in a state of decay—of the *subsoil*, that the organic matter is less in quantity and has entered it chiefly in a soluble state, and that earthy matters are present in it which have been washed out of the superior soil." So much for "A Reader." J.

Bridgewater, Vt., Aug. 23, 1853.

REMARKS.—We dislike long articles, and are well satisfied that most of our readers do. The whole of our correspondent's long communication is given in deference to his wishes, but with the belief that if it had been judiciously divided, it would have hundreds of readers where now it will only find tens. With one or two exceptions, no one has expressed a desire to see long articles in these columns.

For the New England Farmer.

THE SEASON, &C., IN CANADA WEST.

MR. BROWN:—In this section of the country a very severe drought has prevailed during the summer. In the last three months there has not been rain enough to wet potatoes in the hill, consequently the crop will be small. There will also be a light crop of corn and spring grain; winter grain is good.

There will be a fair crop of apples, though not so many as the last year. Pears are quite plenty; mostly native varieties, but many of them are of good quality. One thing deserves to be noticed; the apple-worm, it is said, has *never been found here*. Fruit is fair and sound, and one can eat it without taking animal food with it.

Cherry trees have for several years been infested with an insect resembling a snail. It is of a dark green color, and feeds upon the tender portion of the leaf. In a short time the foliage is changed to a reddish-brown, the leaves resemble small nets, and the fruit entirely fails, or does not ripen well. They usually commence operations soon after the fruit sets. They also attack currant bushes. Please inform what this insect is, and what will prevent its ravages.

A small "*black bug*" did great damage to cabbage plants early in the season, and lately *lice* are troublesome. What will destroy them? Answers may be of service next year. L. VARNET.

Bloomfield, C. W., 8 Mo. 31st, 1853.

SEVENTY SWARMS OF BEES AT WAR.—EZRA DIBBLE, a well known citizen of this town, and for many years engaged extensively in the management of bees, communicates to us the following interesting particulars of a battle among his bees:

He has seventy swarms of bees, about equally divided on the east and west sides of his house. On Sunday, August 14th, about 3 o'clock, the weather being warm, and the windows open, his house was suddenly filled with bees, which forced the family to flee at once to the neighbors. Mr. D., after getting well protected against his assailants, proceeded to take a survey, and, if possible,

learn the cause which had disturbed them. The seventy swarms appeared to be out, and those on one side of the house were arrayed in battle against those on the other side, and such a battle was perhaps never before witnessed.

They filled the air, covering a space of more than one acre of ground, and fought desperately for some three hours—not for "spoils," but for conquest; and while at war no living thing could exist in the vicinity. They stung a large flock of Shanghai chickens, nearly all of which died, and persons passing along the roadside were obliged to make haste to avoid their sting. A little after six o'clock quiet was restored, and the living bees returned to their hives, leaving the slain literally covering the ground, since which few have appeared around the hives, and those apparently stationed as sentinels to watch the enemy. But two young swarms were entirely destroyed, and aside from the terrible slaughter of bees, little other injury was done. Neither party was victorious, and they only ceased on the approach of night, and from utter prostration. The occasion of this strange warring among the bees is not easily accounted for; and those most conversant with their management never before witnessed or heard of such a spectacle as here narrated.—*Connecticut (Ohio) Reporter*.

WINTER WHEAT.

There should be no delay in getting in this important crop, where it has not already been done. The Winter Blue Stem is a fine variety, and yields well in any land which will produce a good corn crop. The quantity of seed per acre may be varied according to the condition of the land; if in fine "heart," a much less quantity will answer than if the soil is thin and poor. We have just secured a crop of MILLER, where only *eight quarts of seed* per acre were sowed, although some of the books, and some of the farmers, recommended *sixteen quarts*. On two acres, good judges estimated that there were five tons of the dried crop. What there would have been, if the larger amount of seed had been sown, we can scarcely conjecture.

On good land we should not sow more than one and a half bushels of wheat; perhaps even less than that. We hope ere long to see DRILLING MACHINES in use in getting in all our grain crops.

SPARE THE BIRDS.—On no pretext whatever, should farmers or gardeners permit their birds to be disturbed. Instead of killing them or frightening them away, they should make use of every means in their power to induce them to increase in number, and become more tame and familiar. The worst of them earn twenty times what they eat; and then, what exquisite pleasure, to have your garden, yard, orchard, or wood, alive and vocal with the music of merry birds. Plant trees for them, build houses if necessary for them, and let no cat, dog, or boy ever molest them, and they will teach you lessons of domestic bliss—preach you sermons—and warble you such hymns as you never heard elsewhere. Be kind to your birds.—*Ohio Farmer*.

For the New England Farmer.

AGRICULTURAL SOCIETIES.—NO. 3.

MIDDLESEX AGRICULTURAL SOCIETY.

This time-honored Society, the oldest in the State, held its fifty-eighth anniversary on the 6th of October. The day was one of those fine October days which are the glory of our New England climate, and all the circumstances connected with the occasion were of the most agreeable character. The Report is, in one respect at least, the model report of the volume. It is condensed into the reasonable space of forty pages. The several committees, in making their reports, have not availed themselves of the occasion to give their opinions upon matters and things in general, nor to indulge in philosophical speculations, calculated rather to exhibit their own learning than to set forth facts that will be useful to their brother farmers. Their reports consist of facts belonging to the several subjects referred to them. If we should make any exception to this general remark, it would be in relation to the report upon apples and pears, and the report upon stock, each of which might be reduced about one-half without material detriment.

The report upon farms, &c., is of a highly interesting character. The practice of propounding a series of questions to the successful competitors for premiums, although attended with a good deal of labor on the part of the Secretary, Simon Brown, Esq., by whom they, as well as the whole report, were arranged, brings out the opinions and experience of enterprising, thinking and successful men, upon a variety of important practical points. We should be glad to see the practice adopted throughout the State.

We have been much interested in the remarks of the committee upon the farm of Mr. Hildreth, and especially in Mr. Hildreth's own statement. It is a straight-forward, plain statement, showing what the will and industry of a Yankee can accomplish. His land is now remunerating him richly for his persevering labor, and in a few years more he will be the owner of a beautiful farm, worth at least ten thousand dollars, its produce increasing annually in value, while the labor of cultivating it is growing less and less. If any men in the country have the prospect of an independent old age, and of leaving a good inheritance to their children, both in material value and in their own noble example, it is such men as L. H. Hildreth.

The results which Mr. J. D. Brown has accomplished, show that he has a head to plan and a hand to execute. He is remarkable for his energy and enterprise. He has developed in large measure the faculty of *go-aheaditiveness*, and the effects are showing themselves all around him. We fear it may be inferred from the statements that the work done upon the farm has all been paid for from its products; whereas, those who know the extensive business, other than farming, in which he is engaged, can readily imagine where the means have come from by which so much has been accomplished. We would by no means insinuate that it was intended that the above inference should be made. But we think that justice to other farmers requires that the intimation should be made. Mr. B. deserves the highest credit for what he has accomplished. Much of his farm consisted of rocky, bushy pasture and

boggy swamp. The twelve hundred bushels of corn which he raised last year, and the more than twenty acres of luxuriant oats which he has mowed the present year, show what may be produced upon such land by perseverance. His fine barns, his noble stock of 60 cows, his long ranges of walls, his net-work of deep drains, all speak loudly of enterprise and success.

We have been much interested in the remarks of the venerable Buckingham, and most heartily commend them to every man in Massachusetts who has only a small patch of land. They show what a little land may be made to produce, when the tillage is adapted to the soil.

We should infer, from the uniform success that attends every attempt to make a fine garden in Cambridge, and indeed everywhere in the vicinity of the metropolis of the State, that gardens are of a social character, and that their productions are more willing to thrive in neighborhoods where good gardens abound, than in those where they are alone in their beauty. We hope no one will be discouraged by this remark from making the attempt to produce a fine garden wherever he may be located, but be led the rather to persuade his neighbors to join him in the same enterprise.

The show of fruits was very fine, and proved that Middlesex is behind no other county in the State in this branch of culture.

There were many fine specimens of stock on the ground, both of native and foreign blood. We suppose no towns in the State can exhibit finer milch cows than those towns in Middlesex that raise milk for the market. But we have no space to discuss this subject, and must refer to our remarks on the Report of the Massachusetts Society, in our first number.

The great feature of the day was the plowing match. Some forty teams were entered for the premiums; and we know not that we have ever seen a more beautiful spectacle than they presented, each moving in its own orbit, doing its own work independently, steadily, quietly, and apparently unconscious that any other team was in the field. The order was perfect, and the work most perfectly done. The Marshal of the day did himself credit. Indeed, in our view, the Colonel never appeared so well at the head of his regiment as in directing the movements of his brother farmers upon this well contested field.

The only thing to be regretted during the day was the want of time to be appropriated to the several departments of the exhibition. We perceive that this is to be obviated the coming year by taking two days for the festival. We trust the exhibition, which is soon to take place, will be in every department, worthy of the efforts which the government of the Society have made during the past year to promote its prosperity and usefulness. It is sufficient to say of the address that it was delivered by Hon. L. V. Bell, and was of course characterized by sound learning, important thoughts and practical common sense. J. R.

Concord, Sept. 5th, 1853.

SOMETHING FOR FARMERS.—We saw, yesterday, the model of a machine for cutting corn in the stalk. It is partially upon the principle of Mr. McCormick's reaping machine, and is designed to cut two rows of corn at a time. Between two wheels there is an axle, to each end of which is

attached a knife for cutting each row of corn. To the axle is also attached shafts for the horse which pulls the machine. The horse walks between the rows of corn, and the knife just on the inside of each wheel cuts the corn, which falls on a bed or place to catch it, in a manner resembling the operations of a wheat reaper. The bed which catches the corn, opens in the centre at the pleasure of the operator to discharge the corn in bundles. We are informed that with one man and a horse the machine will cut 20 acres of corn per day. It is the invention of a citizen of Illinois.—*Rich. Enquirer*.

THE SEASONS.

FROM THE GERMAN.

Hay and corn and buds and flowers,
Snow and ice and fruit and wine—
Suns and seasons, sleets and showers,
Bring, in turn, these gifts divine.
Spring blows, Summer glows,
Autumn reaps, Winter keeps;
Spring prepares, Summer provides,
Autumn hoards and Winter hides.
Come, then, friends, their praises sound;
Summer, Autumn, Winter, Spring,
As they run their yearly round,
Each in turn with gladness sing!
Time drops blessings as he flies—
Time makes ripe and Time makes wise.

For the New England Farmer.

CRANBERRIES.

MR. BROWN:—Dear Sir,—Although I am a stranger to you, I wish to propound a few questions on the growth of cranberries. I have fitted about 2½ acres of upland, which I intend to set with cranberries. The soil is rather of a loam, and one part is more moist than the other. When I commenced, the land was covered with large breaks, what is called with us “negro heads.” I commenced in 1852, with plowing it with two yoke of oxen; did not get at the soil the first plowing; got all the break roots we could, let it dry until last of August, then dragged it and went to carting off the negro heads. The next process was to dig the stone and build the wall. I found so many stone that I was compelled to build a very large wall—a part of it is 7 feet wide on the top. The ground was so wet in the spring I could not finish it until June. It was then too late to set the cranberry roots, and I sowed it with oats and have got a good crop. It has cost me about three hundred dollars up to this time; and now I wish to get the best information that I can how to set over this ground; where I can get the best fruit, and also whether meadow roots are as good as upland; how far apart they ought to be set, and all the necessary information pertaining thereto.

SPENCER ROOT.

Haydenville, Aug. 24th. 1853.

REMARKS.—In an operation of so much consequence as the one you describe, it is important to proceed in the right way at each step. Our own experience in the culture of upland cranberries has not been sufficient to afford reliable data for the guidance of others. We have found only one difficulty in growing cranberries on upland, and that is the prevalence of weeds; in extirpating

these, the runners are started at each weeding, and the vines are thus prevented from running and covering the ground. A thick setting would, therefore, seem advisable—the thicker the better, if as close as within six inches of each other. There is a great difference in the size and flavor of the fruit growing in different meadows. The oblong fruit is much the best. Cranberry culture is as well understood perhaps in the town of Sherburne as any where in the State, and before setting your plants it would be well for you to talk with some of the cultivators there.

SPONTANEOUS PLANTS.

It is well known to our readers that the marshes on South Boston Bay, between Roxbury and Boston, have been “filled up” within a few years, with gravel brought in railway cars from Quincy. This gravel, or a large portion of it, was taken from a hill, where it had remained undisturbed for many centuries. Yet this large tract of “made land” is now covered with a dense vegetable growth, embracing a great variety of plants, most of them of common varieties, the seeds of which are compact, hard and heavy, and covered with an enamelled shell, all of which would seem to preclude the idea that they could have been wafted from a distance through the atmosphere. How could these plants have originated? Were the seeds deposited in the gravel and soil, many ages ago, and have now germinated on being exposed to the action of the atmosphere and heat? or is there some other process of nature by which vegetation, under certain circumstances, may be produced without any apparent cause?

Indeed, there are few things more extraordinary, or have been a greater puzzle to naturalists, than the appearance and development of certain plants in certain circumstances. It is sometimes the case that when a deep pit or well is dug, the earth is thrown up from a great depth, fifty or a hundred feet, and which has been for many ages buried far beneath the surface of the earth, on exposure to the atmosphere and the heat of the sun, will give forth myriads of plants, of a certain description, and which, perhaps, have not been seen in that vicinity for many years. It is stated on good authority, that after the great fire in London in 1666, the entire surface of the destroyed city was covered with such a profusion of cruciferous plant, the *Sisymbrium Irio* of Linnæus, that it was calculated the whole of Europe did not contain so many plants of it! It is also a well ascertained fact, that if a spring of salt water makes its appearance in a spot, at a great distance from the sea, the neighborhood will soon be covered with plants peculiar to a maritime locality, which plants, previous to this occurrence, were entire strangers to the country!

When a lake happens to dry up, the surface will almost always be soon covered by a vegetation which is peculiar, and entirely different from that which flourished on its former banks. In M. de Brebisson's work on the useful mosses, this botanist states that a pond in the neighborhood of Falain, in France, having been rendered dry during many weeks, in the height of summer, the mud, in drying, was immediately and entirely cov-

ered, to the extent of many square yards, by a minute, compact, green turf, formed of an imperceptible moss, the *Phaeum axillare*, the stalks of which were so close to each other, that upon a square inch of this new soil, might be counted more than five thousand individuals of this minute plant, which had never previously been observed in this country.

These circumstances are singular, and furnish a vast field of speculation for the natural philosopher.—*Boston Journal*.

For the New England Farmer.

MIGRATION OF BIRDS.

MR. EDITOR:—I am very glad to see that through the columns of your valuable worthy *Farmer*, there has been aroused a spirit of inquiry upon a subject which involves much interest and deep curiosity in the result; and which is still enshrouded in mystery and doubt; I refer to the "migration of the swallows." The precise time of their final departure for the winter months is still a matter of discussion, and one which I hope your observing correspondents will continue to examine and discuss until the subject has received all the testimony necessary to entitle it to a verdict. Much hereditary opinion is still indulged and received, upon such subjects, where facts and truth should be established; and it seems, to my view of the subject that a direct, easy and efficacious way of obtaining this testimony may be accomplished by enlisting the interest and action of careful and attentive observers in different sections of New England, who will faithfully note the first appearance of the swallow in the spring, and particularly whether seen singly, in pairs, or in flocks, at what time they build their nests—and be particular in noticing their annual conference, or congregating in mass meeting, as if deliberating upon, and maturing their arrangements preliminary to going into winter quarters—and state definitely the day of the month and the time of the day when last seen in autumn. When these points are clearly elucidated, it will open an interesting field for discussion among naturalists, whether the swallow is in reality a migratory bird, and the evidence which may be elicited from so many sources upon the points above referred to, will furnish some reliable points for argument in examining the last proposition, but as this question is still in reserve, I will forbear any further remarks until this field is opened.

With much respect yours, &c.,
Springfield, Sept., 1853. F. B.

DESTROYING TREES.—A thriving farmer, who had just discovered the loss of a hundred newly transplanted peach trees by the mice, said to the nurseryman who furnished them, "This is a hard loss for me, but it will help you nurserymen!" A late paper of high character utters a similar opinion, when describing the losses of young trees by bad pruning and other mismanagement—"no wonder that the business of nurserymen is continuous and thriving!" Nothing can be more erroneous. The great increase in the nursery business is owing, not to continued failures by purchasers, but to the improved cultivation which the trees of late years receive, giving promise of a full remuneration for the outlay. How many men would continue to buy and plant trees, only to lose them? How long

would farmers continue to raise wheat, if no crop was ever yielded? How many gardeners would patronize the seed stores, if the seedsman should bake and destroy the vitality of all that he sold, as we have heard of being done in certain places in the old world? No man will expend his money without a promise of a return, and it is therefore the nurseryman's highest interest to assist as much as practicable in promoting the successful management of the trees he furnishes.—*The Country Gentleman*.

LIST OF STATE FAIRS IN 1853.

Vermont, Montpelier.....	September 13, 14, 15.
Kentucky, Lexington.....	September 13, 14, 15, 16, 17.
New York, Saratoga.....	September 20, 21, 22, 23.
Ohio, Dayton.....	September 20, 21, 22, 23.
Pennsylvania, Pittsburgh.....	September 27, 28, 29, 30.
Michigan, Detroit.....	September 28, 29, 30.
Wisconsin, Watertown.....	October 4, 5, 6, 7.
New Hampshire, Manchester.....	October 5, 6, 7.
Indiana, Lafayette.....	October 11, 12, 13, 14.
Illinois, Springfield.....	October 11, 12, 13, 14.
North Carolina, Raleigh.....	October 18.
Maryland, ————	October 25, 26, 27, 28.
Virginia, Richmond.....	November 1, 2, 3.
Lower Canada.....	September 27 to 30.
Upper Canada.....	October 5 to 7.
Southern Central Ag. Society, Augusta, Geo.....	Oct. 17 to 20.

AGRICULTURAL EXHIBITIONS IN MASSACHUSETTS FOR 1853.

Worcester County Society.....	September 21, 22.
Norfolk County Society.....	September 27, 28.
Essex County Society.....	September 28, 29.
Housatonic Society.....	September 28, 29.
Worcester West County Society.....	September 30.
Bristol County Society.....	October 4, 5.
Middlesex County Society.....	October 4, 5.
Berkshire County Society.....	October 5, 6.
Plymouth County Society.....	October 6.
Franklin County Society.....	October 6, 7.
Barnstable County Society.....	October 7.
Hampshire, Franklin and Hampden Society.....	Oct. 11, 12.
Hampden County Society.....	October 13, 14.
Hampshire County Society.....	October 26.

For the New England Farmer.

CRUELTY TO ANIMALS.

Your June number I think contained useful remarks on *Cruelty to Animals*, and I take the liberty of sending you a copy of a school lesson on that important subject.

R. M.

Canada East.

ON CRUELTY TO ANIMALS.

A man of kindness to his beast is kind,
But brutal actions show a brutal mind.
Remember—He who made thee made the brute;
Who gave thee speech and reason, form'd him mute;
He can't complain, but God's all-seeing eye
Beholds thy cruelty—he hears his cry;
He was designed thy servant and thy drudge,
But know—that his Creator is thy Judge!

THE SOUTHERN AGRICULTURIST.—If the people of South Carolina would take hold and give this paper a list of 20,000 paying subscribers, they would do themselves a great service. It is published at Laurensville, and is among the handsomest and best papers we receive.

For the New England Farmer.

THE CROPS IN WASHINGTON COUNTY, R. I.

MR. EDITOR:—Sir: I take the liberty to send you an account of the crops harvested, and the prospect of the crops unharvested, in our county. And at the same time I shall occasionally indulge my Yankee propensity by asking you a question.

Grass.—This crop has come in very good generally throughout the county, and that which was secured previous to July 20th was of the first quality. But that which has been cut since that time has (a large portion of it) been wet, and consequently is not so good. The kinds of grass usually cultivated here is clover, timothy, red top and burden.

And now I will inquire (my land being a lightish loam,) what kind of grass seed shall I sow, and how much to the acre, and when?

Indian Corn looks remarkably well. If we do not have any early frosts, or any thing else to destroy it, we shall get a great crop. Which is the most economical way of harvesting this crop when it is not very heavy? Cut the stalks, or cut it up by the ground?

Potatoes have nearly all rotted except the Dovers; they stand it with us the best of any kind.

Oats suffered some from the drought in June, but upon the whole have come in pretty well.

Wheat, rye and barley, is not cultivated very extensively here. I believe the former not at all; neither is *buckwheat*.

Millet is cultivated some in the northern part of the county, but not generally in the southern. What I have seen of this crop looks well. What kind of land and manure is best adapted to this crop?

Cow Corn is cultivated very extensively for feeding green, and looks very thrifty. Which is the most profitable to seed for fodder, this crop or millet? Yours truly, J. D.

Wakefield, R. I., Aug. 23, 1853.

P. S. *Fruit*, of nearly all kinds, will prove a failure with us.

Swallows left here about the 18th instant.

Carrots and Onions have blasted very much. Can you tell me the cause? Yours, J. D.

REMARK.—We will answer the above questions next week.

SCHOOLS IN CHINA.

One of the favorite maxims of the Chinese is, "By learning, the sons of the poor become great; without learning the sons of the great are mingled with the common people." The beneficial influence of this maxim is observable in the village schools, which are generally well attended, since it is natural for every father to hope that one of his children at least may distinguish himself by a superior capacity, and thus make his own fortune, as well as that of his family; for as parents are frequently degraded in consequence of the misconduct of a son, so they are often honored and rewarded on account of his virtues.

It is somewhat remarkable, that in a country where the system of instruction is entirely regulated by the laws, and forms so material a part of the constitution, there should be no free schools

supported by the government, nor any establishment for education founded by the munificence of those who, in every age, have acquired fame and riches by their literary attainments. The master of a district school is paid at the rate of ten shillings a year for each boy; yet even this small sum cannot very easily be spared by a laboring man, whose wages are not more than fourpence a day; so that many families of the poorer classes send only one son to school, selecting, of course, him who shows the most promising genius.

The boys are incited to industry and good behavior by the hope of prizes, which are distributed at stated periods, and consist of pencils, Indian ink, paper, and little palettes for grinding the ink, which are all much prized by the Chinese, who call them "the four precious materials," and teach the children to keep them in very neat order.

In most of the country villages and in all large cities, there are evening schools for boys who are obliged to work in the day time; for the children of the poor are inured to labor from a very tender age, so that little fellows of five or six years of age may be seen trudging along the roads, with a stick across their shoulders, carrying loads, and they are set to work in the fields almost as soon as they can walk. It is the usual practice, now, for persons of rank and wealth to engage private tutors for their children; but whether the latter are educated at home or at a public school, they must undergo the regular examinations before they are eligible to office, nor are they taught in any way differently from the boys at the village seminaries.—*China, Pictorial, Descriptive and Historical.*

For the New England Farmer.

THE CURCULIO.

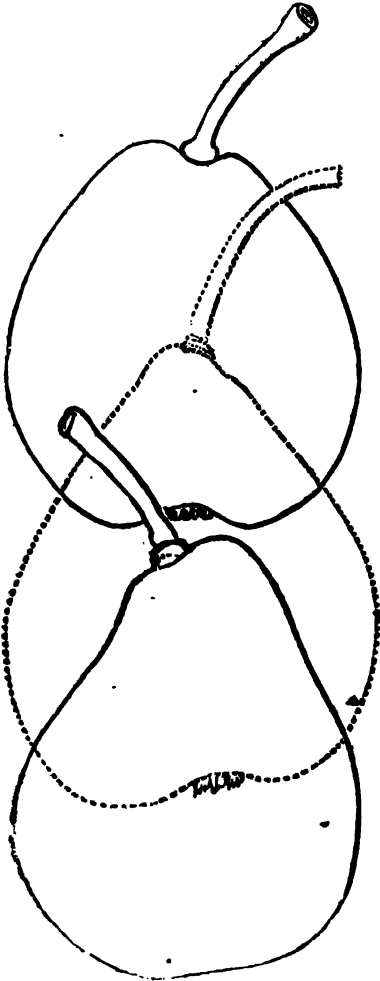
MR. EDITOR:—Sir,—I see by your last paper, from extracts from the *Greenfield Republican*, that a writer in that journal has found a remedy for the 'bite of the curculio. His remedy may be a good one for a man of leisure, but the days and nights are not of sufficient length to warrant its general adoption. I will tell you briefly what I have done for my plum trees. My remedy for the *curculio* is this: as soon as the insect had made his appearance, and the plum had fairly commenced growing, I sprinkled the leaves and plums on the trees all over with *air slacked lime*, selecting a wet morning for the operation, and after that the insects all left. On some trees that had no lime, scarcely a plum was left; on one tree that I put lime on one side, the curculio did not trouble; while on the side that had no lime, the plums were completely destroyed. When the drought came on, I found that my plums failed for the want of moisture; I took a barrel, and made a small hole in the bottom, and placed it on the root of the trees, and then filled it with water, and as often as the water was exhausted I filled it up; and now I shall have a rich crop of plums, and free from the *rot* that prevails in this county; the limb I sent you a few days ago was from one of those, and is a fair specimen. J. LAGE.

Topsfield, Sept. 5, 1853.

☞ An earthquake had occurred on the lake shore, near New Orleans, rocking houses and causing great alarm.

THE TYSON PEAR.

The TYSON PEAR is not among the most popular of the pears, but is worthy of a place in every fruit garden, where variety is desired. The fruit is of medium size; short pyriform; light yellow, russet patches, red in the sun; stem medial, set on a point; basin broad and shallow; flesh white, melting, very juicy, sweet, with a very delicious aromatic flavor. Latter part of August to first of September. The original tree according to Cole's Fruit Book, is in Jenkintown, Pa., and is six feet in circumference.

**DEARBORN'S SEEDLING.**

(DOTTED OUTLINE.)

The illustrations of this fruit by different artists vary a good deal; so much so, as scarcely to preserve the characteristics common to almost every variety. Mr. COLE was a careful observer of fruits, and living in the neighborhood where this pear originated, and having cultivated and tested it, we think his description of it entitled to full

credit. He says it is small; turbinate; stem an inch long, in a slight cavity; shallow basin; very smooth, yellow, minute dots, a little russet around the stem; flesh white, juicy, melting, of a sweet, sprightly flavor. Ripe August 20 to September 10. Originated by Gen. H. A. S. DEARBORN, Roxbury, Mass. DOWNING says it bears most abundant crops in every soil, and is one of the most desirable early varieties, succeeding the Bloodgood, and preceding the Bartlett. The young shoots are of a long, dark brown color.

THE OSBORN PEAR.

Rather small; obtuse pyriform; bright yellow, with brownish specks; stem stout, obliquely set; calyx small, slightly sunk; flesh white, tender, melting, juicy, of a sweet, lively, aromatic flavor, with slight astringency. Aug. at Cincinnati. Vigorous. Originated by Mr. JOHN OSBORN, Economy, Ia. Ranked among the best early pears, and Ernst thinks that it will sustain this character, but he has fruited it only one year.

*For the New England Farmer.***LONG WHEAT HEADS.**

MR. EDITOR:—Among all the accounts of large things which I have ever read, I do not remember of ever having seen an account of large (or long) wheat heads. I have just shelled a head of wheat which contained 60 kernels of good wheat. I think I could pick out many such heads from the wheat I have raised this year. Why not get from forty to sixty bushels from an acre, provided we do not go over too much ground?

Yours truly, A. S.

Freedom, Me., Aug. 23, 1853.

NATIONAL EXHIBITION OF HORSES.—The great favor with which the suggestion of an exhibition of horses at Springfield has been received by the public, has induced the organization of an association in that city, for the purpose of making arrangements for a display of imported blood and American breeds of horses next month. Hon. George Dwight has been elected President of the Board of Managers, James M. Thompson Vice President, and William Stowe, Corresponding Secretary. The managers of the exhibition have adopted rules and regulations, and published a list of premiums offered, which range from \$20 to \$200. The exhibition will be held at Government Square, Springfield, from Wednesday, October 19th, to Saturday, October 22d.

We recognize in the list of Managers the names of some of the most enterprising and public spirited citizens of Western Massachusetts, and we have no doubt the exhibition will be one of the most successful affairs which has originated in this section of the country.—*Transcript.*

Hon. N. P. Banks, Jr., of Waltham, has accepted the invitation of the Barnstable County Agricultural Society, to deliver the address before the Society at their annual cattle show and fair, on the 7th of October.

HINESBURGH "IMPERISHABLE POTATO" FACTORY.

We heard sometime since that there was established in this vicinity, at Hinesburgh, a factory for putting into a very portable and almost imperishable form the edible substance of potatoes, without injury to its qualities as an article of food.—From the importance of such an operation to the agricultural operations of this State, the report excited a lively interest in our mind, and we set ourselves without delay to ascertain the character of the process, and to see how far it was deserving of special attention.

We will give our readers an account of the operation, and of what was produced by it. If their opinion does not coincide with our own, that the subject is of great consequence to this State, capable as it is, of producing for use and manufacture, potatoes of best quality to an almost unlimited amount, we shall be disappointed.

Taking the hint perhaps from the preservation of tea, mosses, &c., by drying, some years ago experimenters found out that our common vegetables, such as cabbages, turnips, carrots and potatoes, might be taken fresh, thoroughly dried so promptly as to allow of no incipient fermentation, and pressed and packed in tight vessels so as to exclude moisture; and in that state kept for long periods. For use, it was only necessary to soak them properly in fresh water, when they would recover their full bulk, and on cooking, be found to differ very slightly indeed from others which were fresh. Here was an important discovery. The expense was small—the reduction of bulk enormous, (a thing of great consequence for shipping and travellers) and the preservation was complete. Government commissioners in Europe examined the processes, and tested and approved the result; and at once the preparations came into use under their sanction. The application of this method to potatoes at the Hinesburgh factory is substantially as follows. Being thoroughly cleansed, deprived of skins and properly prepared, fresh currents of air are moved in contact with the potato pulp by machinery. The air rapidly takes up and carries off the moisture. The material is made to take the shape of tubes, (macaroni fashion,) and when perfectly dry, is broken in a proper mill into the form of what is called "samp" or "hominy." Indeed it might be easily mistaken for that article made from our common yellow Indian corn. By the process, it has lost nothing but water. But by that loss it is made to occupy but *one-sixth* of its original bulk, and what before weighed *four pounds*, now weighs but *one pound*. In that condition it can be packed in tight cases or in tin canisters, and be transported just as easily as so much dry ice. Years of trial have proved the unchanging character of the preparation.

Now then for the use. For *one pound* of it take *three pounds* of boiling water, or (to speak cookery-book fashion,) put a *tea cup full* of it into *four tea cups full* of boiling hot water. In ten minutes the water is entirely absorbed, and the result is a *well cooked dish of mashed potatoes*, ready to be salted and buttered, or dealt with, as a like dish made from fresh potatoes, might be. The taste differs slightly from that of fresh potatoes prepared in the same manner. We speak advisedly, for we have *tried it*. Though we think any one would prefer to crush for himself a fresh mealy

potato, if he were in a condition to choose, we have often, within the last five years, had to be content with using potatoes not a whit better than we are speaking of,—hardly as good even.

It is difficult to comprehend at once the great importance of such preparation of the potato. To a very large portion of the human family, the potato is an article of prime necessity for daily food. All who have been accustomed to use it, feel the deprivation severely if placed beyond its reach for any considerable time. Yet the bulkiness and perishable nature of the tuber in its natural condition, make its transportation for great distances by either land or sea an impossibility. For the want of it the health of crews on long voyages, and of soldiers or other persons occupied away from where it can be procured, is often greatly injured. In some districts too, where it is relied upon as the chief article of food, great distress is caused by the failure of a crop, because the want cannot be supplied except at very considerable expense. Let the preparation of this "imperishable potato" be made common, and all these evils are substantially done away with. Government ships, whaling vessels, merchant ships, will make it a regular part of their stores. It will not occupy near the room of ship biscuit, and can be kept in store with less risk of spoiling. We are informed that European vessels already make it regularly a part of their stores, when going on voyages across tropics,—and that the discovery ships under charge of Dr. Kane, are supplied with it. Travellers across the continent, and inhabitants of those parts of our own country where the vegetable cannot be raised successfully, must eventually find the prepared article a most convenient one for use.

Few persons have any conception of the amount of nutritive food which can be raised in the form of potatoes, where the soil and climate are favorable. Though, pound for pound, less nutritious than wheat or rye, as a whole, no other crop can equal it. Careful experiments have shown that from the same amount of suitable ground where there could be raised, on the average, 3400 lbs. of wheat, or 2200 lbs. peas, there could be raised 38,000 lbs. potatoes; or, reducing them all to the absolutely dry state, for 3036 lbs. of wheat, 2080 lbs. of peas, there would be 9500 lbs. of potato,—more than three times the amount of food produced in the shape of wheat, and more than four times that in the form of peas. We quote this statement from the Chemical Technology of Dr. Knapp, of Giessen,—a recent work of very great authority. The practical results of some experimentalists on the feeding of cattle with these different articles, place the relative value of the potato at a higher mark still.

For many years the potato crop has been a very important one in Vermont, not barely for its extensive use at home for food for man and beast, but because it has been largely worked up in the starch factories. With a great many farmers of small means it has been a chief reliance wherewith to obtain cash in hand by its sale. Since the railroads were built, great quantities have gone to market in a fresh condition at highly remunerative rates to the producer. The terrors of the potato rot have in a great measure passed by; and the production can be, and will be greatly increased, if the article we are considering shall come into a wide use, as we think it must, for

commercial purposes. We learn that the factory at Hinesburgh is in active operation, and with abundant orders from the sea-board. We wish its owners success, and look to see, ere long, "Brinsden's Imperishable Potato" spoken of as one of our large articles of export.—*Burlington Free Press.*

THE HAPPY FARMER.

BY MRS. L. H. SIGOURNEY.

Saw ye the farmer at his plow
As you were riding by?
Or, wearied 'neath his noon-day toil,
When summer suns were high?
And thought you that his lot was hard?
And did you thank your God,
That you and yours were not condemn'd
Thus like a slave to plod?

Come, see him at his harvest home,
When garden, field, and tree,
Conspire, with flowing stores to fill
His barn and granary.
His healthful children gaily sport
Amid the new-mown hay,
Or proudly aid with vigorous arm,
His tasks, as best they may.

The dog partakes his master's joy,
And guards the loaded wain,
The feathery people clap their wings,
And lead their youngling train.
Perchance the hoary grandsire's eye
The glowing scene surveys,
And breathes a blessing on his race,
Or guides their evening praise.

The Harvest Giver is their friend,
The maker of the soil,
And earth, the Mother, gives them bread
And cheers their patient toil.
Come, join them round their whet'ry hearth,
Their heartfelt pleasures see,
And you can better judge how blest
The farmer's life may be.

For the New England Farmer.

VERMONT STATE FAIR.

MY DEAR BROWN:—I left Lowell at half-past eight this morning, in the V. O. train, and came on through Nashua, Manchester and Concord and followed up the valley of the Merrimac and along the southern and western base of the Kearsarge, to Enfield. Then leaving the Merrimac, we followed the serpentine Mascoma, a small stream, but so crooked that we cross it fourteen times in six miles. This stream rises in Enfield pond. At Danbury we stopped about eight minutes to lunch. From that place we jogged along, taking up and setting down ten cent passengers, after the manner of an old-fashioned stage coach.—This train above Concord is truly an accommodation train. We lost half an hour at Concord, and an hour and a-half from there to Montpelier, where we arrived a quarter past 6 o'clock. Just two hours after the train was due. After leaving the Mascoma, we soon struck the White river, the valley of which we followed to the Connecticut, which we crossed at West Lebanon into Hartford. On crossing the Connecticut, the soil at once assumes a new character. We are no longer in the Granite State. Rocky Mountains and ledges of granite are no longer seen. Abrupt hills, capable of tillage to their very summits, and beautiful val-

leys teeming with verdure take their places. Slate stone and banks of clay show themselves upon the borders of the stream. I noticed, as I passed along through the upper part of New Hampshire and in Vermont, that the farmers are cutting up the corn at the ground and shocking it in the field, where it is left to ripen. They do not cut the stalks as we do in Mass.

The corn is just beginning to turn. It is not as forward by some two weeks as that in the vicinity of Boston. There is said to be a good crop on the ground. On reaching Montpelier, I found the hotels and boarding houses crowded to overflowing. But I reported myself at head quarters, and received every attention that I could desire. I find the citizens very polite and attentive. The show ground is at the east end of the street, upon a beautiful elevation. The most perfect arrangements have been made at an expense of some thousands of dollars. A range of open sheds has been erected for the exhibition of vegetables, agricultural implements, the products of art, butter, cheese, wool, &c. A beautiful arena has been enclosed, and a splendid trotting course prepared, and an extensive scaffolding erected for the accommodation of spectators, not indeed equal to the amphitheatre of Trajan, but the largest and most convenient structure of the kind which has ever been got up in New England, for a similar occasion. It is designed to seat 3000. A lofty flag-staff stands in the centre of the arena, from which floats the star spangled banner. An abundant supply of water is provided on the arena, with a beautiful fountain. Flags ornament the several sheds and indicate that this is the great gala day among the Green Mountain boys.

Wednesday 14th.—The people began to assemble on the ground soon after 8 o'clock. At 9 the officers and committees appeared, and the services of the day commenced. I first visited the floral hall where the flowers and fruits and fancy articles were exhibited. A fine car of millinery and a beautiful case of silver ware attracted notice.—Some fine harnesses drew the young horsemen around them. The exhibition of fruits was much below my expectation. It by no means did justice to the State; indeed, there seemed to be but very little interest taken in the subject. I understand there are a good many apples in the northern part of the State this year.

The show of Devon stock was very good. Some very fine animals of this breed were on the ground. This seems to be the favorite stock just at this time; they are considered quite equal as dairy stock to the Durhams, and are said to take fat more readily. Then there were two or three fine Durhams and a few Herefords. There were many fine specimens of French Merinos on the ground, and a few Spanish. I saw no other breeds worthy of notice; the great feature of the day was the exhibition of horses. There were several families of them, arranged in separate classes, with a committee to each class. There were 35 Sherman Morgans, 4 Bulrush Morgans, 5 Messengers, 17 pairs of matched horses, 20 Geldings and Mares, and 11 foreign horses, making 128 horses, besides breeding mares and colts.

There were many splendid animals; at the national exhibition which is to come off at Springfield, they must look out for their laurels. The Vermonters mean to take a full share of the prizes.

The show of agricultural implements was not large. There were Robinson's Montpelier plows, and Taylor's Bristol plows. But the plows were those of Ruggles, Nourse and Mason. There were 20 of these plows on the ground. There were two of the best horse powers which I have seen, and decidedly the best hay and corn cutter which Yankee ingenuity has invented. This is the invention of Daniels, and manufactured at Woodstock. The price is very high, \$18. I am certain it may be sold profitably for \$12. When it is sold for \$10 or \$12, it must take the place of all others as a corn cutter. It cuts corn butts from half an inch to 2 inches in length. Corn, cut more than from one to two inches in length, may as well not be cut at all. The use of corn for fodder is increasing, and if the proprietors will not be too grasping, they will sell an immense number, and make more money in the end.

The oration was set down in the bill for 2 o'clock, but they acted on the principle that it is two till it is three. At three the orator took the stand, and a large assembly collected upon seats arranged upon a natural amphitheatre. But the clouds threatened rain, and in the course of 15 minutes the rain began to fall, and the audience began to scatter, and in about 30 minutes, Dr. Wheeler closed his beautiful and well written address.

I will give you in few words some of its leading thoughts. He began by paying a beautiful tribute to the late Governor Paine, who recently died in Texas on his way home to his native State. He then imagined an assembly in ancient days, in Egypt, Greece or Rome, and inquired what appearance it would have presented, and what would have been the condition of its masses, and compared that condition with that of the assembly before him. He then proposed his subject—the relation of agriculture to the growth and prosperity of the State. The spirit of traffic is cosmopolite, but the tiller of the soil becomes attached to his home. He does not buy his farm as so much stock in trade, but to build a home for himself and family; and here he builds a school-house in which to educate his children, and a church in which to worship God. The outward condition of the humanity of the commonwealth depends upon the soil, and its ultimate strength and security are derived from it—agriculture is the power at home, which controls and modifies our internal institutions. The home life of the farmer is the ground-work of our character—civil and domestic. The soil is held directly or indirectly from the State. Its possessors do not hold it for themselves alone; personal property may vanish, but real estate remains for the life and security of the State. The landed tenures of England constitute the strength of the State. The landed tenures of our State are the pillar of its strength; as agriculture flourishes, so will the State. We must be influenced by patriotism as well as by other motives, to promote the advancement of agriculture. The most intelligent and cultivated men in Europe and in this country, have ever been interested in agriculture, and lent their influence to its promotion. These are a few of the leading thoughts in this elegant discourse. President Wheeler was followed by Governor Wright, of Indiana, who spoke for a few moments in the style of true western eloquence. The trotting match, which was to have come off at 4 o'clock, was prevented by the rain. Attorney Gen. Drum-

mond and several gentlemen from Canada were present, as well as several from New York and other States. Mr. Tucker, of the *Albany Cultivator*, and our venerable friend, Major B. Wheeler, were of the number. It was estimated that there were 15000 people on the ground.

The rain is now falling copiously, and promises to spoil the plowing tomorrow. A few teams plowed this P. M. I left one of the Judges of this, Washington county, holding one of Ruggie's plows, and turning a furrow full 12 inches deep, from which I judge that you will judge that he is a Judge who will judge righteous judgment.

Yours truly,

Montpelier, Sept. 13, 1853.

J. R.

POISONED VALLEY.

A singular discovery has lately been made near Batten, in Java, of a poisoned valley. Mr. Alexander Loudon visited it last July, and we extract a paragraph from a communication on the subject, addressed by him to the Royal Geographical Society:—

"It is known by the name of Guevo Upas, or Poisoned Valley; and following a path which had been made for the purpose, the party shortly reached it with a couple of dogs and fowls, for the purpose of making experiments. On arriving at the mountain, the party dismounted and scrambled up the side of a hill, at a distance of a mile, with the assistance of the branches of trees and projecting roots. When at a few yards from the valley, a strong, nauseous, suffocating smell was experienced; but on approaching the margin, the inconvenience was no longer found. The valley is about half a mile in circumference, of an oval shape, and about thirty feet in depth. The bottom of it appeared to be flat, without any vegetation, and a few large stones scattered here and there. Skeletons of human beings, tigers, bears, deer, and all sorts of birds and wild animals, lay about in profusion. The ground on which they lay at the bottom of the valley appeared to be a hard sandy substance, and no vapor was perceived. The sides were covered with vegetation. It was proposed to enter it; and each of the party having lit a cigar, managed to get within twenty feet of the bottom, where a sickening, nauseous smell was experienced, without any difficulty of breathing. A dog was now fastened to the end of a bamboo and thrust to the bottom of the valley; while some of the party with their watches in their hands, observed the effect. At the expiration of fourteen seconds he fell off his legs, without moving or looking around, and continued alive only eighteen minutes. The other dog now left the party and went to his companion. On reaching him, he was observed to stand quite motionless; and at the end of ten seconds fell down; he moved his limbs after, and lived only seven minutes. A fowl was now thrown in, which died in a minute and a quarter; and another, which was thrown in after it, died in the space of a minute and a half. A heavy shower of rain fell during the time that these experiments were going forward, which, from the interesting nature of the experiments, was quite disregarded. On the opposite side of the valley to that which was visited, lay a human skeleton, the head resting on the right arm. The effect of the weather had bleached

the bones as white as ivory. This was probably the remains of some wretched rebel hunted towards the valley who had taken shelter there, unconscious of its character."

CATTLE GNAWING BONES.

MR. EDITOR:—I wish to inquire if you, or any of your numerous subscribers, can tell me why it is that my cows and other cattle have a liking to chew old bones that they find in the fields, that they will stand for hours and chew them; they will even leave their salt many times for this purpose. Please answer through the *Cultivator*.

May Flower, April, 1853.

VIXEN.

We can give no other reason than the appetite they acquire for some peculiar flavor possessed by the bones, or by the small remaining portions of muscle and gelatine which remains upon them. Animals sometimes show nearly as strong an appetite for certain substances, as some men do for tobacco. It has been said that the practice of chewing bones, arises from a natural instinct for phosphate of lime in such animals as do not get a sufficiency of this ingredient in their food, especially in those which are confined to old pastures which have exhausted the soil of its phosphate. This strikes us as exceedingly improbable; for, to say nothing about the extraordinary analytical discrimination which this would evince, throwing in the back-ground the most delicate tests of the longest-headed professors, it so happens that the animal's teeth usually make no impression whatever upon the hard bone, and only get small portions of the more soluble gelatine, &c. To test this matter, observe whether cows will continue their liking for bones, after small portions of bone-dust or dissolved bones have been mixed regularly with their food. We have known some animals, and colts more especially, to have an extraordinary propensity to chew leather, yet we never could discover that such animals possessed an idiosyncrasy, but merely a depraved appetite. Some horses have a strange propensity to gnaw wood whenever they can lay their teeth upon it, without any particular object or reason.—*Country Gentleman*.

SUNDRY OBSERVATIONS.

HENS.—Why do hens scratch about the roots of trees and shrubs? Every gardener is exasperated by the obstinate pertinacity with which fowls uncover the roots of his roses, raspberries, cherry trees, and if there is any thing else which he especially wishes to protect and secure. The truth is that hens know where to look for their food; and at the roots of shrubs, are the precise places where worms are to be found; either because they feed on the sap of the plant, or wish to be ready to climb it in due season, or because a better protection than elsewhere is there afforded them.

"Shanghai hens will not scratch." Yes, but they *will* scratch, if not as bad as others as bad as they know how.

Hens are great lovers of lettuce. They do not ask for vinegar, or sugar, or oil to eat with it, but will mount into the hot bed and take it by word of mouth just as they find it, more to their own satisfaction than that of the gardener whose choice salad heads they spoil. Lettuce might profitably

be sown for fowls when confined, and would conduce not simply to their "amusement," but to their comfort and health. Fowls need the food proper to the season. In summer they want grass and green succulent food, with but little grain; in winter they want grain, straw or hay, and meats.—*Prairie Farmer*.

THE SEASON AND CROPS.

The pinching drought of June and July has been succeeded by timely and copious rains, so that vegetation took a new start and has gone on vigorously up to this time, Sept. 19th. The aftermath, or second crop of grass, is greater than we have ever known it before; on many fields larger than was the first crop. Many barns have thus been filled beyond the expectation of their owners in the early season.

The peach crop is full to repletion—thousands of trees are broken down, and many persons will suppose, are ruined; but if the mutilated limbs are cut off smoothly in October, we are confident that it will be just such a process as a great many of the long, bare limbs, with a handful of leaves on their extreme ends, required. They have resembled the denuded legs of a poor Shanghai chicken, more than peach-bearing branches.

The corn crop has not yet been touched by frost, and is filling up for a heavy gathering. A large proportion of the stalks are cut, which gives opportunity to see that the crop will be more than an average one.

Potatoes, particularly chenangoes, have rotted badly. The Davis, black chenangoes, long red, Danvers seedling, and some others, have not suffered so much. Still, one-half, perhaps, of the whole crop, will be cut off.

Oats, barley, rye and winter wheat, where threshed, turn out a full average crop. Fall seed is abundant and sweet; no frosts have yet touched it.

On the whole, no labor has been better rewarded than that of the FARMER, and his annual tribute of thanksgiving should be hearty and free.

For the New England Farmer.

SWALLOWS.

DEAR SIR:—The Chimney Swallows were seen here, for the last time this year, upon the 29th of August; the Barn Swallows on Sept. 3d, and the Martins, Sept. 1st.

Dr. Hubbard, the owner of one of our best farms here, lately made a curious calculation as to the number of grasshoppers upon his land. By pretty accurate measurement it was ascertained that there were *twelve bushels to the acre*.

Isn't this a model letter to an editor!

Yours truly, ANN E. PORTER.

Springfield, Vt., Sept. 14, 1853.

REMARKS.—The above is, truly, a model letter—*multum in parvo*. It contains just such facts as we are happy to place on record. It will lead

others into similar observations. We really hope Dr. HUBBARD has a thousand turkies!

COAL AGAINST SINEWS.—Professor Henry, President of the Mechanics' Institute of Washington, says: "It has been proved that, on an average, four ounces of coal are sufficient to draw, on a railroad, one ton a mile. It has also been found on experiment that a man working on a tread-mill continually for eight hours, will elevate one and one-half millions of pounds one foot high.

Now good Cornish engines will perform the same work by the expenditure of a pound and a half of coal. It follows from these data that about 5 tons of coal would evolve as much power during its combustion as would be equal to the continued labor of an able-bodied man for 20 years, at the rate of eight hours per day; or, in other words, to the average power of a man during the active period of his life."

GOING UP.—Wood is now selling in this city for eight dollars a cord, with the prospect of a decided upward tendency. Coal is also advancing. Flour sells for seven dollars, and seven dollars and twenty-five cents. All kinds of provisions are sold at enormous prices. Every article of groceries, too, has risen within the last month, and dealers assure purchasers that it will be for their interest to make immediate purchases, as provisions are still "going up."—*Chronicle*.

EXHIBITION OF HORSES.—There will be an exhibition of imported blood and American breeds of Horses at Springfield on the 19th, 20th, 21st and 22d days of October. The Exhibition is not local or sectional in its objects, but all citizens of the Union are invited to send their contributions and to join in the competition for the premiums. We are glad to notice this new interest in regard to the Horse. We will publish the rules and regulations and list of the premiums next week.

CHINA.—INTERESTING EXTRACTS.—We take the following extracts from an authentic work, published by Mr. Williams, who, from a long residence in China, has been enabled to write knowingly upon the various subjects embraced in his work:

Animals of China.—The denseness of the population has long since entirely driven out all wild quadrupeds; and there are also few domestic ones, such as are found in Eastern countries. Beasts of burden are in a great degree superseded by the means of transport afforded by the numerous rivers and canals, and by the coolies or porters, a class of athletic men, who take the place of animals in carrying burdens and in dragging boats. Animals are excluded, to leave more food for men. There are no meadows for feeding cattle; but the entire soil is used in raising food for the inhabitants. Wild cats are sometimes caught, and are considered a great dainty. Monkeys are found in the

south-west provinces. What few horses and asses are found in China are small, and very inferior in every respect. The buffalo is sometimes used in plowing. Dromedaries are used between Peking and Tartary. There are also hogs, goats, and sheep. There is but one variety of dogs in the country, an animal about one foot high and two long, resembling a small spaniel. Rats are very abundant, and furnish the common people with meat. They are very large and destructive to crops.

Of the *birds* in China, there are the eagle, the falcon, the magpie, crows, sparrows, cormorants, curlews, quails, pigeons, larks, pheasants, the rice birds, and many species of aquatic birds. Cormorants are used by the Chinese for catching fish. The falcon is imperial property, and the magpie is sacred to the reigning family.

Fish form a very important part of the food of the Chinese, and great care is taken in raising them in artificial fish ponds. The gold and silver fishes are kept in glass globes as ornaments. Among the fish eaten, are the cod, sturgeon, mullet, carp, perch, sea-bream, &c; crab-fish and oysters are common on the coast.

The larger species of *reptiles* are unknown in China. Frogs, lizards, and fresh water tortoises are common. Venomous serpents are very rare.

Boy's Department.

KINDNESS TO ANIMALS.

Once, when his father and the workmen had been cutting down a quantity of timber, Isaac discovered a squirrel's nest in a hole of one of the trees that had fallen. It contained four new-born little ones, their eyes not yet opened. He was greatly tempted to carry them home, but they were so young that they needed their mother's milk. So after examining them he put them back in the nest, and with his usual busy helpfulness went to assist in stripping bark from the trees. When he went home from his work toward evening, he felt curious to know how the mother squirrel would behave when she returned and found her home was gone. He accordingly hid himself in a bush to watch her proceedings. About dusk, she came running along the stone wall with a nut in her mouth, and went with all speed to the old familiar tree. Finding nothing but a stump remaining there, she dropped the nut and looked around in evident dismay. She went smelling all about the ground, then mounted the stump to take a survey of the country. She raised herself on her hind legs, and sniffed the air with an appearance of great perplexity and distress. She ran round the stump several times, occasionally raising herself on her hind legs and peering about in every direction, to discover what had become of her young family. At last she jumped upon the prostrate trunk of the tree, and ran along till she came to the hole where the babies were concealed. What the manner of their meeting was nobody can tell; but doubtless the mother's heart beat violently when she discovered her lost treasures all safe on the warm little bed of moss she had so carefully prepared for them. After staying a few minutes to give them their supper, she came out, and scampered off through the bushes. In about fifteen minutes she returned and took one of the

young ones in her mouth, and carried it quickly to a hole in another tree, three or four hundred yards off, and then came back and took the others, one by one, till she had conveyed them all to their new home. The intelligent instinct manifested by this little quadruped excited great interest in Isaac's observing mind. When he drove the cows to pasture, he always went by that tree to see how the young family were getting along. In a short time they were running all over the tree with their careful mother, eating acorns under the shady boughs, entirely unconscious of the perils through which they had passed in infancy.

Some time after, Isaac traded with another boy for a squirrel taken from the nest before its eyes were open. He made a bed of moss for it, and fed it very tenderly. At first, he was afraid it would not live; but it seemed healthy, though it never grew so large as other squirrels. He did not put it in a cage; for he said to himself that a creature made to frisk about in the green woods could not be happy shut up in a box. This pretty little animal became so much attached to her kind-hearted protector, that she would run about after him, and come like a kitten whenever he called her. While he was gone to school she frequently ran off to the woods and played with wild squirrels on a tree that grew near his path homeward. Sometimes she took a nap in a large knot-hole, or, if the weather was very warm, made a cool bed of leaves across the crotch of the boughs, and slept there. When Isaac passed under the tree, on his way from school, he used to call "Bun! Bun! Bun!" If she was there she would come to him immediately, run up on his shoulder, and so ride home to get her supper.

It seemed as if the animals were in some way aware of his kindly feelings, and disposed to return his confidence; for on several occasions they formed singular intimacies with him. When he was six or seven years old, he spied a crow's nest in a high tree, and, according to his usual custom, he climbed up to make discoveries. He found that it contained two eggs, and he watched the crow's movements until her young ones were hatched and ready to fly. Then he took them home. One was accidentally killed a few days after, but he reared the other, and named it Cupid. The bird became so very tame, that it would feed from his hand, perch on his shoulder, or his hat, and go everywhere with him. It frequently followed him for miles, when he went to mill or market. He was never put into a cage, but flew in and out of the house, just as he pleased. If Isaac called "Cu! Ou!" he would hear him, even if he were up in the highest tree, would croak a friendly answer, and come down directly. If Isaac winked one eye, the crow would do the same. If he winked his other eye, the crow also winked with his other eye. Once when Cupid was on his shoulder, he pointed to a snake lying in the road, and said "Cu! Cu!"—The sagacious bird pounced upon the head of the snake and killed him instantly; then flew back to his friend's shoulder, cawing with all his might, as if delighted with his exploit. If a stranger tried to take him, he would fly away, screaming with terror. Sometimes Isaac covered him with a handkerchief, and placed him on a stranger's shoulder; but as soon as he discovered where he was, he seemed frightened almost to death. He

usually chose to sleep on the roof of a shed, directly under Isaac's bed room window. One night he heard him cawing very loud, and the next morning he said to his father, "I heard Cupid talking in his sleep last night. His father inquired whether he had seen him since; and when Isaac answered, "No," he said, "Then I am afraid the owls have taken him." The poor bird did not make his appearance again; and a few days after, his bones and feathers were found on a stump not far from the house. This was a great sorrow for Isaac. It tried his young heart almost like the loss of a brother.—*Life of Isaac T. Hopper, by Mrs. L. Maria Child.*

Advertising Department.

☐ A limited number of advertisements of an appropriate character will be inserted in the monthly Farmer at the following

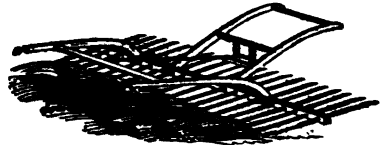
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1000 dozen superior Grass Scythes.

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Also Lawns, Grain and Bush Scythes, of the best quality.

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2500 dozen Hay Rakes.

Hall's, Simonds's, Carpenter's, Page & Wakefield's, Robinson's, Duggan's and English best Hand Rakes.

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Quinebang, Chocolate, Norway Rag and Indian Pond; also, Woodward and Talacre (English) Scythe Stones.

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A well selected assortment of the celebrated Blue Sheet, warranted. Also, Grindstones of all sizes, mounted on frames and rollers complete.

Grindstone Fixtures, viz: Flanges, Arbors, Cranks and Rollers.

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Delano's Patent Revolving and Spring Tooth Hay Rakes; all of which will be sold at wholesale or retail, at very low prices, by

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June 25, 1853.

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Suffolk Pigs and Breeding Sows for sale, by GEORGE W. WILSON, Malden, Mass.

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July 16, 1853. G.W.

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JUST RECEIVED, the following assortment of Agricultural and Horticultural Books, embracing the standard works of eminent American and European writers, on the Farm, the Orchard, the Garden, &c. &c.

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Feb. 26.

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Improved Sod Ploughs, for flat furrows—Improved Scotch Ploughs for lapped furrows—Improved Stubble Ploughs, which are especially adapted to deep tillage, or varying from 6 to 12 inches in depth.

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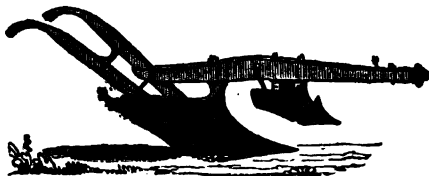
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Boston and Worcester, Mass., Jan. 1, 1853

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Aug. 20, 1853.

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JOHN W. BRUCE.

Amherst, N. H., Sept. 17, 1853.

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Somerset, June 4, 1853.

B. G. & C. CHACE.
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Is published on the first of every month, by JOHN RAYNOLDS and JOEL NOURSE, at Quincy Hall, South Market St., Boston.

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Highland Nurseries, Newburgh, NEW YORK.



A. SAUL & CO., in calling the attention of their patrons and public in general to their very extensive stock of Fruit and Ornamental Trees, Shrubs, &c. &c., which they offer for sale the coming autumn, would remark, that owing to the past summer being one of the most favorable for the growth of trees which they have had for many years in this vicinity, their stock of trees and plants in every department is large, more thrifty, and in every respect finer than usual. To particularize within the limits of an advertisement would be impossible; they therefore refer planters and dealers in trees to their Catalogue, a copy of which will be sent to all post paid applicants, on enclosing a Post Office stamp for the same.

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Highland Nurseries, Newburgh, N. Y., Sept. 3, 1853.

2t

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June 11.

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. V.

BOSTON, NOVEMBER, 1853.

NO. 11.

RAYNOLDS & NOURSE, PROPRIETORS.
OFFICE....QUINCY HALL.

SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

CALENDAR FOR NOVEMBER.

"Come, bleak November, in thy wildness come—
Thy mornings clothed in rime, thy evenings chill;
E'en these have power to tempt me from my home,
E'en these have beauty to delight me still
Though Nature lingers in her morning weeds,
And waits the dying year in gusty blast,
Still added beauty to the last proceeds,
And wildness triumphs when her bloom is past."

In looking over the old books it is curious to notice the customs that were observed by those who have lived and acted their part before us. Thus, in Ireland, on the *first day of November*, they always had a merry-making, and had a drink which they called "Lambs' wool," which was made by bruising roasted apples, and mixing them with ale, or sometimes with milk. Lambs' wool, apples and nuts were added as a necessary part of the entertainment, and Forster says the young folks amused themselves with burning nuts in pairs on the bar of the grate, or among the warm embers, to which they give their name and that of their lovers. Indeed, the day among them was dedicated by superstition to the angel presiding over fruits, and called *La Messe des Pommes*, meaning a religious ceremony over the fruits, or something like it.

There is something interesting and impressive in these observances; interesting, as showing another age and phrase of the world; and impressive, as showing how the heart has ever been inclined to give utterance to its emotions, whether of thanksgiving or adoration, even among the most rude and unlettered. Then if we follow the ages along, we cannot but observe how the teachings of religion have led us gradually away from the Heathen deities, up to Him from whom continually streams that clearer light, of reason and of faith.

NOVEMBER has been shrouded in gloom by many of the poets, even by many of our own poets, who have witnessed our many-dyed forests in Autumn, and basked in the soft, hazy Indian summer, "when the trees and shrubs, retaining their leaves, present thousands of tints from their branches, in

which are mingled the bright scarlet, the crimson, the orange, the yellow, the bronze, the brown, which, with the carpet of green that often covers the fields at this season, form a scene of beauty unrivalled and unequalled in any other part of the world." Many of the fall flowers are lovelier than ever, as they yield to the first touch of the frost. We know that

"All the pride
Of the sweet garden fades. Where now the Rose,
The Lupin, Aster, Balsam, or Carnation?
Or where the Lily, with her snowy bells?
Where the gay Jasmine, odorous Syringa,
Graceful Laburnum, or the bloom-clad Arbutus?"

We know that decay—not death—comes upon all these beautiful creations, but only to be reproduced in new forms and afford a new delight. Pages of dolorous verse have been written upon this beautiful month, until the common mind is impressed with a melancholy and sadness at its approach, that cheats it of half its enjoyments.

ANALYSIS.—Therefore, the farmer can do no better job now, than to *analyze* his feelings and ascertain whether he is realizing all the enjoyments that ought to flow in upon his soul in this beautiful month; it will prove to him one of his best operations in his FARM WORK FOR NOVEMBER.

PLOWING.—It is said that the lands in the Scioto valley, Ohio, which have yielded large crops of corn many years in succession without being manured, are able to sustain this enormous draft in consequence of the *fineness* of the soil; all its component parts being nearly as fine as flour. We believe there are other causes, but if this is the principal one, what an important lesson it teaches us with regard to our own lands. The autumn plowing of stubble grounds is not generally practiced by our farmers. Some object, because, they say, when the land is light the wind blows off the fine particles, and a portion of the richest part is lost; another says the labor is lost, because the same field requires to be plowed again in the spring before planting. But if pulverization is so impor-

tant, it will far overbalance these objections, admitting that they are valid, which we are not inclined to do.

We believe the atmosphere to be the great store-house of fertilizers, and ready at all times to impart them to such spots of the earth as are ready to receive them. If the surface is smooth, hard and crusty, it cannot catch the gases as they pass, or imbibe the dews and rain water with their rich ammonia; they pass on to a more genial soil, where the doors are open to let them in, and where they find friends and agreeable occupation. We believe a corn or grain field well plowed in the fall, and turned up to the kindly influences of the sun and air, to be equal to a moderate manuring, taken in connection with the decaying stubble that is turned under by the operation. Sward lands may also be plowed with advantage this month, as there is a great weight of succulent grass on the surface; this being turned under becomes a "bank" upon which the plants will draw with profit.

Then there are other reasons why we should plow in the fall; the teams are stronger than in the spring and there is less hurry than when the earth opens her bosom and demands the seed from which is to spring the future crops.

ROOTS.—Turnips, beets, carrots, ruta bagas and all other roots, we believe, with the exception of the parsnip, keep better, if gathered before the severe frosts touch them. They should not be bruised and ought to be excluded from the light.

SWINE.—While the weather is moderately cold, swine fed and housed well, will fatten rapidly, and of course profitably. They will also have a better appetite and fatten faster on a variety of food than on a single kind, even if that be of the best quality.

YOUNG CATTLE.—If young cattle are forced to subsist upon the east wind, and coarse weeds, until the first or middle of December, it will be found a most unprofitable mode of keeping them. If we would have good oxen and cows, we must begin to make them so while they are young. No care, or after-feeding will be likely to atone for neglect while the system is assuming its forms. To be lean, misshapen and rough, becomes a *habit* which it will be difficult to break up. But give them good shelter, generous feed and kind treatment, and their good points will become early developed and sustained through life.

MANURES.—Haul out and pile the summer manure in convenient places for spring use, such as is intended for top-dressing, and cover well with muck or loam. Green manures, if plowed under, will be in their appropriate place.

PRUNING.—The constant reader of the *Farmer* has found before this time that we believe in autumnal pruning, unless the cold comes on with unusual severity. All wounds made in pruning

heal quicker, and the tree is injured less, if they are covered with the shellac varnish or paint.

Head in peach and plum trees, by cutting off at least one half of the present year's growth. If the trees are quite young take less—if old, take more than one-half; they then throw out new shoots nearer the trunk and become more compact.

BUILDINGS.—See that the barn-doors are in order, and all loose boards made fast, and the hovels made as tight and warm as possible. No open places should be left in house or barn, about the underpinning, where the wind shall rush in. It is in vain that you supply fuel where these openings exist.

For the New England Farmer.

A TRIP TO THE CONNECTICUT RIVER.

MR. EDITOR:—I last week enjoyed so much in a visit to the fertile valley of the Connecticut, that I propose giving you a slight sketch of it.

I arrived in Springfield on Tuesday. It was the first day of "Cattle Show." The weather was cold and misty, and the show meagre. Wednesday it was arranged to have something of a horse show, but the cold storm prevented any demonstration worth noticing. The most satisfactory part of the business of this day was the Society's dinner. This was exceedingly liberal and well-served. It was partaken of in a comfortable hall, where the unfavorable weather without could have little effect. The Mayor of the city presided. The venerable Dr. Osgood asked a blessing, introducing appropriate language from Scripture with singular felicity.

After the substantial had been enjoyed, the Mayor called upon several gentlemen for speeches. With great deference to the invited guests—the commissioners of the Armory investigation—now in progress here, but a single one responded before the honorable gentlemen were called up. The President of the Board of Commissioners, Col. Stevenson of Virginia, a gentleman of commanding mien and ready wit, spoke at considerable length. He ranked himself with the farmers. He had retired from political life, where he had wasted so many years, and was enjoying the cultivation of a few acres where he hoped to end his days. The gentleman alluded to the advanced condition of the arts in Massachusetts, and said his short residence here would enable him to carry home much information and many things which would enlighten his neighbors and friends. As a gentleman before him had pleasantly remarked that he should carry home with him the best productions of New England—school ma'ams—he replied that Virginia already had a numerous band of teachers, who were doing a noble work for them.

Ex-Governor Steele of New Hampshire followed with some practical remarks. He urged deep plowing. Few would undertake to raise garden vegetables without deep pulverization, and a like treatment was economy in the field.

The next speaker was Chancellor Walworth of New York. His remarks, of a more miscellaneous character, were, also, well received. Other gentlemen followed. Dr. Osgood related a dialogue he held with a gentleman from Louisiana, one of the Adam's funeral committee.

"How is it," said the Southerner, "that we only have to throw down the seed and give it a kick, and you are obliged to shoot yours into the soil, and we are poor, and you are rich?"

The Dr. answered, "that by the additional labor the farmer here obtained a profitable return. He does not say to his boys and help 'Go,' but he says 'Come,' and heads them himself early in the morning."

The planter replied, "that if he were to come to Louisiana, he would see him out early in the morning on his horse superintending his work."

"Ah!" said the Doctor, "the farmer never gets on to his horse here."

The dinner passed off very pleasantly.

Thursday was a clear, fine day, and, as the unfavorable weather had prevented the people generally from visiting the great tent, where fruits, vegetables, manufactures, &c., &c., were exhibited, the show there was kept open through the day and evening. The officers of the society were very diligent to make the display of articles as good as possible, aware that the out-of-door attractions had been small.

We saw here a sewing-machine for the first time. It was Howe's. The article to be stitched was laid upon a revolving cylinder, and upon turning a crank a little arm over it struck down a needle, which made a hole for a loop of thread which instantly followed. As quick as the loop was driven through, a little shuttle inside the cylinder, directly under the working spot, slipped along through the loop drawing a second thread which fastened the stitch. The sewing was done with great exactness and rapidity. The price of the machine was two hundred dollars.

Thomas Chubbuck, engraver, exhibited many proofs of his skill. One was the Lord's Prayer, on a bit of silver, one-fourth as large as a three cent piece.

The show of pears and grapes was very fine. I never saw finer clusters of grapes. The vine must have had a sunny location, and a rich, large root-bed.

The vegetables were fair. Apples were scarce. Very few apples are to be had around Springfield this year. Whittemore & Co., of Chicopee, had plows of various patterns; but a few from Quincy Hall, with "long rakish" handles, so easy to grasp and hold, went a little ahead of them. Pumps and fountains—the latter in full play—were an attractive feature. Prospective housekeepers looked curiously into the many stoves. Owners of horses examined the saddlery. All looked at the endless rows of flowers, the speaking daguerreotypes and the handsome paintings.

In the evening the tent was lighted with gas, and filled with a large and gratified multitude.

I took the cars at five minutes past 8 o'clock the next morning for Mt. Holyoke. As we rolled out of the great station house up the river, another train started for Boston (East,) and a third for Albany (West.) The space between them widened and widened until both disappeared behind the hills.

The scenery along the banks of the Connecticut is unrivalled for interest and beauty. The railway, for miles above Springfield, follows the frequent and peaceful curves of the river. I was particularly struck with the appearance of the steam, which, owing to the condensing frosty air

of the morning, seemed belohed forth in extraordinary volumes from the engine. Looking back upon it over the winding course we had followed, it seemed a silver wall dividing the water from the land. I was standing upon the platform of the rear car, enjoying the fine prospect and the increasing warmth of the bright sun, when the cars entered the covered bridge which crosses the river. There was no floor to the bridge, and a look down upon the rushing flood was a little startling; the cars crossed at a moderate speed. The Norwalk tragedy is not yet forgotten. I was soon in sight of the great dam at Holyoke. The water of the whole Connecticut is here checked by a structure of man's; and either turned aside into wide canals to drive immense factories, or left to fall over, down a distance of thirty feet. The water in falling assumes a wavy motion, which is communicated to the air, so that windows in the neighborhood rattle and shake continually.

The company here have a capital of four millions of dollars. As yet their hopes have not been realized. The power has not been taken up as was expected. The prices for privileges, it is said, are high. The water-power is, probably, the greatest in the whole world.

The water set back by the dam forms quite a little sea. Along the shore are immense quantities of drift-wood, brought down from distant forests by the great spring floods.

I was amused with the race of the train with a duck. The bird kept straight up the river, not at all alarmed at the engine, but doing his prettiest to get ahead. For about a mile it seemed a draw game; but when the train slackened its speed, the bird shot ahead and disappeared while we halted at *Smith's Ferry*. This is a swing ferry. Not that you get into a swing, and by a good push are sent across. Oh, no! Passengers go on board a regular ferry-boat, which is connected by a strong wire to a high mast set in a massive stone pier, far up in the middle of the river. When the boat is pushed off from the shore, the current carries it rapidly towards the middle of the river. A wide board is dropped into the water a few feet, on the upper side nearest the stern of the craft. The current, pressing against this, sends forward the boat to the opposite shore.

I was soon at Northampton, 17 miles above Springfield. I lost no time in obtaining directions to the far-famed mountains, and was soon riding over the rich intervals towards the object of my journey. I saw the fields of broom corn for the first time in my life. Most of it was *tabled*; that is, broken or lopped down about half its height. The clusters of tough spires which form the broom were heavy with seed, which, I was told, is ground into a very respectable meal for cattle and swine. The fields of Indian corn were cut up, stalk and all. The ground left bare showed that the *hilling* process had gone out of fashion. I saw one man harrowing in a piece of rye on corn land. He had two stout horses and a harrow to each. One horse he drove before him with long reins, and the other guided by the bit!

I was about jerked from my seat as the wagon bumped upon the boat, which took us over the Connecticut again. It was a horse-boat. Two nags stopped eating their provender to catch one another upon a tread-wheel arranged under the deck, but we reached the opposite shore in a few minutes without their relative position being changed.

I was soon toiling up the steep side of the mountain. A man was plowing some of the highest cultivated land and scolding at his horses with great energy. I wondered that such a beautiful prospect as was now before us did not awaken in him kindlier feelings. There is a carriage-road half way, or more, up the mountain. At the end of this a rude shed is standing, where horses may be tied and guarded for twelve and a half cents each, by somebody who appears at a call. Provender is provided, also, to those who will pay for it. From this station, the path to the summit, 144 rods, is narrower and steeper. It consists of sharp, broken stones, and is shored up on the outer side by dead trees which abound.

The latter part of the way I found to be *up hill* work, most decidedly, and was glad when I arrived at the top. There I found the martin-box I had seen from below to be a good-sized house! The yard around it enclosed all the eligible standing-ground, so I applied my knuckles to the door to which the path led. It was opened by a comely young woman, and I was soon upon the house-top with glass in hand. The wind was cutting and cold, and although I had put on my overcoat, I was soon obliged to abandon my post. A short time, however, afforded much gratification. The beautiful valley of the Connecticut was before me for miles. The village of Northampton lay shrouded in belts of trees. Church spires rose up from the thick forests on every hand. Numerous villages dotted the landscape. I could have looked long upon such a scene in a milder day.

I learned that the family remain through the winter upon the mountain. The getting up of a sufficient quantity of ice requires considerable labor. Why don't they freeze their ice up there, as there is a spring near the summit? I found a sweet little girl of some three years of age in the house, whose pretty manners set me searching my pockets for plums.

It was much easier descending. On my way down I met the proprietor of the house with his horse and little cart. The load, which would have been just a freight for a wheelbarrow, seemed quite enough for the stout horse, which stopped every few rods upon the steep ascent to take breath.

I reached the cars at half-past eleven, and was soon back again, with my bunch of broom-corn and pleasant experience, in Springfield.

Before my return home the next day I visited the Cemetery and the Arsenal. The Cemetery is a charmed spot. The surface is one series of vale and hill and quiet dell, approached by winding paths. The deep green of beautiful trees mingles with the light from the spotless marble. The murmuring fountains chant a continual requiem for the dead, while the spray falls, an emblem of the mourner's tears.

The new Arsenal is worth visiting. The warden told me that in the one room and a half, now filled with guns, there were one hundred thousand. In all the arsenals, there are three hundred thousand muskets.

They are manufactured at the rate of four thousand a month. The shops are filled with the most ingenious and complicated machinery, which accomplishes the work with a speed and exactness truly wonderful to witness. The cost of the arm is now about \$7.50. Ten years ago it was over \$17.

East of the Armory grounds is the lot enclosed

for the Horse Show, to come off the 19th of this month. Two hundred stalls are being erected here, inside a high board fence, which surrounds the thirty acres. The Horse Show promises to be a great affair.

But it is time this communication were ended. It shall be. Let me say, however, that the kind hospitality I received, although nameless here, will not soon be forgotten.

W. D. B.

Concord, Mass., Oct. 3d, 1853.

For the New England Farmer.

PLOWING.

BY HENRY F. FRENCH.

The book of Job is supposed to have been written about fifteen hundred years before Christ's coming; and the writer of it speaks of *Plowing* with as much apparent familiarity as you or I should mention the process in the *Farmer*. In the first chapter, it is said that a messenger came unto Job, and said, "The oxen were plowing, and the asses were feeding beside them, and the Sabeans fell upon them and took them away."

For more than three thousand years men have been learning how to plow. It is the most common and familiar operation on every farm; and yet, perhaps, is worse done than any other work. One reason is, that it is so common a process, one that we learn to perform, in some way, so early in life; that it is as mechanical a business as turning the grindstone, and few farmers think of expending much thought about the matter. Anybody is thought to have wit enough to plow; and plowing, especially with oxen, being a slow, dull business, is entrusted to slow and dull people. Job talks like a thrifty farmer, and his live stock, including five hundred yoke of oxen and three thousand camels, would indicate that his farm work was worth looking after. But, like many of modern times, he neither held the plow himself nor required his boys to do so; for, on that unlucky day just alluded to, "his sons and daughters were eating and drinking wine in their eldest brother's house." He left the plowing to his servants, just as most of us do, if we have them.

Ancient and common as plowing is, it is, perhaps, done with less intelligence and real appreciation of its advantages than any other farm labor. Ask the first half-dozen plowmen you meet at their work, what good it does to plow the land, and their answers will indicate, at once, how much thought they have given the subject. One thinks the main object is, to kill the weeds and grass, and another to make easy hoeing. The common laborer always prefers the plow which carries the *widest work*, with very little regard to pulverization. The manifest fault in plowing, within my personal observation, is, the use of plows which run shoal and wide. The teamster always likes to show at night a large day's work, without hurting his team; and a plow which runs six inches deep and fourteen inches wide, gets over the ground much faster and easier than one which runs eight inches deep and a foot wide. Turning the land over is thought to be the main object; and in this region, where oxen are more abundant than men, four or six oxen are often used upon a large plow, to do the work which one yoke would perform much better.

Jethro Tull thought and taught, that by thorough pulverization of the soil, manure might be dis-

pensed with entirely, and, although this was an error, it had much truth in it. A recent series of analyses, by D. A. Wells, reported in the Mass. Transactions for 1851, seems to support his conclusion, that a principal difference between a very fertile soil of Ohio and an almost barren soil of Massachusetts consisted in the difference in the fineness of their constituent particles.

The chief value of plowing is, that it loosens the texture of the soil, and thus admits a free circulation of air and moisture, which, by chemical action, disintegrate or break down the stony or mineral portions of the soil, so that they may be more readily dissolved and taken up by the roots. By the same process, the roots are enabled to penetrate more readily, and wander farther in search of those substances, which, by instinct, they have the power of selecting for their food.

None of these objects are attained by merely turning over a solid mass of earth a foot square, pressed together by the mould-board. The Double or Michigan Plow, I regard as the greatest improvement of modern times, in this department of husbandry, although by no means a recent discovery; for London, in his Encyclopedia of Agriculture, published I think thirty years ago, gives a drawing of one much like those now used, yet it is new to most of our farmers.

At most of the cattle-shows in New England, the Michigan Plow has been seen in operation this autumn; and were this the only good accomplished by these gatherings, the farmer would be well paid for attending them. At the recent State Fair in New Hampshire, several were exhibited in use at the plowing-match, each drawn by a span of horses, or a single yoke of oxen, through a tough sward, by no means free from stones, and performing the work to the admiration of all, who had never before seen their operation. I will not say all were pleased, for one old *pagan*,—a word which I use here of course in its primitive sense, as signifying merely a *person from the country*,—this old *pagan* said he did not see as this new-fashioned plow was of much use, for if you would only harrow the land plowed with the common plows, it would be about the same!! He hit the nail on the head by accident, for the difference is just about this,—that the Double Plow leaves the land pulverized, as if well harrowed, without being trodden down, or even pressed by a single foot of man or beast, while land harrowed, especially with oxen, is often much injured by trampling.

Plow your land fine and deep, is the advice which our farmers most need, at present. It is a common idea that deep plowing is not profitable unless we have a large quantity of manure. There is something in this idea, though not much.—Plants, as before hinted, have the power of selecting and of searching for manure, as they have of turning towards light. Place a bone in the soil, a foot from almost any plant, and the roots of the plant will find it. An ordinary crop of corn sends roots into every inch of soil, to the distance of five or six feet from their stalks. Make the land light and the manure fine, and the plant will do the rest. It does not devour the barren sand, but sucks up, with its thousand little mouths, the elements of nutrition which it needs, and which are dissolved for its use.

I have to-day noticed, at an excavation near the

factory in Exeter, the roots of a young elm, more than twelve feet below the surface, in solid gravel. Last summer, in a loose sandy soil, in this place, where a well had been taken up, I saw the roots of an apple tree, which penetrated to the bottom thirteen feet by measure. The apple tree was manifestly in search of water; what the elm could have been seeking, except a good hearty embrace of mother Earth, is not so readily imagined.

I have avoided all scientific discussion in this article, because our friend and brother, Hon. F. Holbrook, has, at sundry times in the *Farmer*, given us line upon line and precept upon precept as to the structure and use of plows, and in his society the position of learner on this subject becomes me much better than that of teacher.

H. F. F.

Exeter, N. H., Oct. 12th, 1853.

THE SABBATH.

[From the new edition of the Poetical Works of Sir EDWARD BULWER LYTTON.]

Fresh glides the brook and blows the gale,
Yet yonder halts the quiet mill;
The whirling wheel, the rushing sail,
How motionless and still.

Six days of toil, poor child of Cain,
Thy strength the slave of Want may be;
The seventh thy limbs escape the chain—
A God hath made thee free!

Ah, tender was the Law that gave
This holy respite to the breast;
To breathe the gale, to watch the wave,
And know—the wheel may rest!

But where the waves the gentlest glide,
What image charms, to lift thine eyes?
The spire reflected on the tide
Invites thee to the skies.

To teach the soul its nobler worth,
This rest from mortal toils is given;
Go, snatch the brief reprieve from earth,
And pass—a guest to heaven.

They tell thee, in their dreaming school,
Of Power from old dominion hurled;
When rich and poor, with juster rule,
Shall share the altered world.

Alas! since time itself began,
That fable hath but fooled the hour;
Each age that ripens Power in Man,
But subjects Man to Power.

Yet every day in seven, at least,
One bright republic shall be known;
Man's world awhile hath surely ceased,
When God proclaims his own!

Six days may Rank divide the poor,
O Dives, from thy banquet hall!
The seventh, the Father opens the door,
And holds His feast for all!

For the New England Farmer.

CRANBERRY CULTURE.

MR. BROWN:—I have on my farm a bog containing eight acres—soil twelve feet deep, formed of decomposed vegetable matter, and in dry weather I can team over any part of it. It is situated so that I can plow it very easily, and I have determined on making a cranberry bog of it; and my purpose in addressing you at this time is to inquire concerning the best way and time to render it such. In two or three places small patches of vines

have sprung up and grow finely; some advise me to sow the berries—others to obtain the vines and set them out; and I would feel under very great obligations to you, if you would inform me which you consider the best method and time, &c.

Respectfully yours, FRANK P. SEABURY.
New Bedford, 9 mo. 30th, 1853.

REMARKS.—We can only reply now very briefly. If there are a great many bushes on the meadow, flow it until they are killed, then clean it up and set the vines. If there are hassocks, cut them off clean and cart them away. If there are neither bushes or hassocks, take a bog hoe and cut up a turf and insert the vines. The vines should be taken up with plenty of turf and soil, and the closer you set them the sooner will the ground be covered. There is much difference in the kinds of cranberries, the oblong being larger and richer than the round ones. Transplant as early as you can in the spring. It requires five or six years for the vines to arrive into bearing from the seed.

For the New England Farmer.

SOUTHERN FARMING.

FRIEND BROWN:—I have been visiting some of the plantations in this section of country, and knowing the interest you take in all matters connected with farming, I had thought a description of what I have seen might not be uninteresting to you at this time. First, then, the plantation of Col. WADE HAMPTON, which is about 3 miles below here on the right bank of the Congaree, and contains about 15,000 acres, 2500 of which is river bottom land, the richest lands in the State. Col. Hampton has the finest herd of Durham cattle that I have ever seen. I found them grazing in a pasture of some 500 acres, where the grass was from one to two feet high; the pasture is the part of the bottom lying next the river, and in the bend, so that the river bounds three sides of it. The sight of the cattle on such a plain, with nothing to obstruct the view, except here and there a stately cotton-wood tree of immense size, was beautiful; but when taken with his other stock, which consisted of about 30 horses, 380 sheep and about 30 Cashmere goats, the view surpassed anything of the kind I had ever seen before. Col. Hampton has spared no expense to have the finest and purest stock in the country,—his favorite cattle are the Durhams. He has some 4 or 5 very fine Devon cows—and some Ayrshire cows that are hard to beat. His stock of sheep are the Bakewell, and as fine a flock as you would wish to look upon. His Cashmere goats were imported some few years ago from Asia, by Dr. J. B. DAVIS, of this town, and are likely to prove a very profitable animal for this part of the country; their wool has been sold as high as nine dollars a pound. He has one of the Brahmin cattle that is a most beautiful animal, the stock of which was imported by Dr. Davis, with the goats. The horses I will say nothing about, except that Col. Hampton has stood at the head for many years of those engaged in rearing and improving that noble animal, the horse.

His cotton crop now looks well, and the prospect is that it will be an average one. His corn

is uneven in consequence of the severe drought we had from April 1st to July 4—and will hardly yield more than two-thirds of a crop; one field I rode through, of 500 acres, was looking well—a part of it very fine indeed; as I sat upon my horse the stalks were above my head. His method of raising corn, is to plant in rows one way 4 feet apart, and works it but one way; the stalks in the rows are about 20 inches or 2 feet apart. He has been experimenting with guano on his corn, and he told me he thought it the best and cheapest manure that can be used on his lands—there was a very marked difference to be seen in his corn where the guano was applied, both in the stalk and the ear. He is the most sanguine advocate for guano that I have met with, in this part of the country. Col. H.'s stock of hogs, Brahmin geese and Shanghai fowls, were in keeping with his cattle. His residence is on an eminence that overlooks the valley of the Congaree for many miles, and from which is a view of the ridge that divides the waters of the Edisto and the Congaree. In front of the house is a flower garden, covering an area of some 5 acres, which is beautifully laid out and filled with the choicest flowers and shrubs; the display of roses is truly magnificent. In the rear of his house is the vegetable garden and fruit orchards, which are ample, and in which I found some of the finest peaches I have ever seen—varieties not cultivated with you. He has a great many grapes; the Lenoir was in eating, and was very fine and delicious. He has quite an apple orchard, which is young yet, but I saw an apple that weighed two pounds, that grew on one of his young trees—the variety I did not know; the trees are healthy and grow vigorously. Col. H.'s residence is one of the finest and most tastefully laid out that there is in this part of the country, in proof of which I need only to say that it was the favorite resort of the lamented Daniel Webster while on a visit to this town a few years since. Adjoining Col. H.'s plantation on the north is that of Mr. THOMAS TAYLOR; the soil and crops are similar to those of Col. H.'s.

Mr. Taylor has a fine herd of cattle, a cross of the Durham and Ayrshire, but they do not compare with those of Col. H. Mr. Taylor's sheep are a cross of the merino on the Bakewell; they looked very fine indeed; he told me his last clip of wool averaged 5 1-4 lbs. to a sheep. The rearing of sheep here, I think, must be profitable, and the business is largely on the increase in this section of country; the river pastures which are subject to inundation from freshets in the river are nearly valueless for planting, but they afford the finest pasturage in the world for cattle and sheep. You will excuse this bad letter, and I will write you a description of the fair and cattle show at Augusta, Geo., and will write a better letter if possible.

Yours truly,

S. D.

Columbia, S. C., Aug. 26, 1853.

REMARKS.—In some of his future letters we hope our correspondent will give us the average number of bushels per acre of the several crops cultivated in his region.

EXTRAORDINARY SITE OF A TREE.—At the village of Witherley, in Leicestershire, seven miles from Market Bosworth, a gooseberry tree, with a stalk

as thick as a stout man's thumb, and the bush from four to five feet in diameter, may be seen springing out of the joint in the stone wall of the church tower, at a height of 84 feet from the ground. It has grown there for a century or more, thriving greatly in most seasons, and dwindling and pining during drought. The seed was probably dropped by a bird, where it has germinated.

AGRICULTURAL FAIR.

AT WESTMINSTER, VT.

The Show for WINDHAM COUNTY, Vermont, took place at Westminster, a pleasant village on the banks of the Connecticut, 4 miles below Bellows Falls, on Thursday and Friday, Oct. 6 and 7.—Excellent preparations had been made for the occasion by enclosing 25 acres of level land near the village, and the erection of tents, booths, &c., on the grounds. In the enclosure the whole exhibition might be seen, plowing match, frotting course and all.

The entries of stock were not very numerous, not so much so as we had expected to see in that fertile region of country. Working cattle were presented in considerable number, but we are confident were not the best the county could produce. There were some fine milch cows of mixed blood, two or three fine, and probably pure blood bulls, and some handsome young cattle. The swine were not numerous or remarkably good. The Messrs. CAMPBELL presented specimens from their flocks of sheep, which are so well known as to need no description here. There were also poultry, farm implements, &c., on the ground. But in horses, the Vermonters run away from us. There were many present of great spirit and beauty; if they don't beat the telegraph in speed, it is because they cannot, and not because they lack the disposition.

The show of fruits, vegetables, and butter and cheese, did not do credit to the ancient renown of Vermont. She must not trust her fame entirely to the merits of her noble horses—the field, the garden, the dairy, and skill in household manufactures must be sustained among her people, or her laurels will be won by some of her persevering and watchful sisters.

There is evidently a want of system and arrangement—we feel bound to speak the truth in kindness—in the carrying out of the objects of the society. We have examined the *premium bill* with care, and find the list liberal, and the rules judicious, and the action of the society so far, such as to ensure an exhibition to command the admiration of every other county in the State. The deficiencies seemed to us to be in the imperfect arrangements to carry out their original designs. With more age and experience, and the determination of a few energetic spirits, all that can reasonably be desired may be speedily accomplished. There was an address on the first day by the editor of this paper.

Our thanks are due the Hon. FREDERICK HOLBROOK, and the gentlemanly officers of the society, for their kind attentions, and to Mr. HENRY KELLOGG and his estimable lady, for the hospitalities of their house during our stay.

For the New England Farmer.

MR. BROWN:—Dear Sir,—The sentiments embodied in the enclosed extract are such as it is desirable to keep before "Young America," in this very "progressive" age; and, as I have noticed with pleasure your endeavors to make the *N. E. Farmer* exert a good moral influence, I venture to beg you to insert it among your selections.

Respectfully yours, W.

GOVERNMENT AND THE BIBLE.—How often do we hear, from the halls of Congress and from the press, eulogiums upon our republican government, as though this, simply and alone, were the source of our happiness and prosperity as a nation. But such is not the case. It is not government which is the blessing; government is an evil, though a "necessary evil." It is the *Bible* that gives good government, and *this* is the cause of our happiness and prosperity; it is this, alone, which has given us a "power on earth." France, or any other nation, can easily form a republican government, but so long as they are unenlightened by the truths of the word of God, they may as well have an emperor as a president. Let us remember that we owe our liberty to God, and not to any wisdom of man exhibited in laws or constitutions. So long as we make his Word our chart, we shall ride safely through the storms of life; but that rejected, we grope in heathenish blindness.

Sunday, Oct. 9th, 1853.

REMARKS.—We not only believe the above, and mean to refer to the book mentioned for our own chart in life, but thank our correspondent for his willingness to aid in keeping the world "on the right track."

MASSACHUSETTS LANDS IN MAINE.

We have already apprised our readers of the final acceptance by the Maine Legislature of the proposition to purchase the public lands in that State belonging to Massachusetts. The lands included in this sale are as follows: 35,535 acres of undivided lands, and 424,569 acres of lands held in severalty—all contained in the first five ranges; and 265,408 acres west of these ranges, held in severalty unincumbered, 414,245 acres undivided, and 268,544 held in severalty which are permitted mostly for six or seven years. The price paid is \$362,500. The sum of \$112,500 was appropriated in part payment for the land. The remainder of the debt is to be provided for by certificates of stock, in sums not less than \$10,000 each, with coupons for each year's interest at the rate of five per cent. per annum, the stock to be redeemable at such times as in the opinion of the Treasurer of Maine shall be advisable, not exceeding twenty years.

One half of the sum received by Massachusetts for these lands will be added to the common school fund, and the other half to the Western Railroad Sinking fund. The school fund now amounts to \$1,202,676 88, to which will be added the further sum of \$181,250, or one-half of the amount received by this sale of the Maine lands. The amount of the school fund is limited by law to a million and a half. There is a provision in the amended Constitution to increase it to two million dollars.

For the New England Farmer.

OBSERVATIONS

ON SETTING YOUNG TREES FOR ORCHARDING IN MASSACHUSETTS.

I have read authors from France, Long Island, Washington and other places, to little advantage. They can send their books and trees, but they cannot send their climate and soil. I have purchased trees from the above places, likewise from New Jersey and towns on the North River. They are not adapted to our soil and climate. I would give three times as much for a tree grown from the seed in or near Essex, Suffolk, Norfolk, or Middlesex county.

In determining the right time for setting trees in the autumn, I have compared them to the human body. I say I am like a nursery tree that I am going to move. What is it that continues my life from week to week, and so on? It cannot be my food, for that is earth, prepared by fallen wisdom to suit fallen appetite. Neither is it air. It is the circulation of the blood in the body—so is it in the tree. Stop it, in either or both of them, and death will ensue. Now how shall we take the advantage of this blood? In moving the tree we shall be obliged to wound its feet or roots. It will not do to move it in the full flow of sap, as in summer, for then the sap is needed for other purposes than healing. It will not do to move it late in the fall, when the sap is still, and there is no action to heal the wounded part. We must take the medium flow of sap, after the last growth of the tree is over, as in the last of Sept. or October.

Last year I transplanted 260 young, unbudded, nursery apple trees about the middle of October. The land upon which I set them, was a rough piece, which had previously been covered with wild bushes and brambles. I took less pains in moving them, than I ever did with any trees, for I cared more about getting them out of the nursery, and improving the land, than I did about them. In hoeing them through the summer, I found only three or four dead ones. Many of them made wood from two or three inches, to a foot in length.

Last fall, I sold a thrifty pear tree to one of my neighbors. He claimed the right to dig it himself, and kept it in the ground until the frost had stripped it of its leaves—then he moved it. In the spring it put out a few leaves, and appeared as though it would live, but these soon dropped off, and it died, although he watered it well.

I sold quite a large a cherry tree to a man in Salem, early in October. He took it immediately home and set it out. He told me the next season, that the tree had put out well, and had made considerable new wood.

As regards spring setting, there is little to be said. Common sense tells us the sooner the frost is out of the ground the better for transplanting. Last March I set sixty apple trees for orchard trees. In two or three instances I met frost. Every one of them lived, and many of them made new wood, from three and four to twelve and fourteen inches. Some of them bore scattering apples of full size.

It is more than fifty years since I first set trees. I have set them in all stages of the circulation of the sap, except in summer. I am satisfied that just in proportion as the setting of the trees is neglected until after the proper time, so will they be hindered in healing and in shooting roots, and will come forward with less growth. I have set them after the buds had begun to open. These often live and often make stunted trees.

JONATHAN BOYCE.

For the New England Farmer.

GARGET.

FRIEND BROWN:—I have recently cured several cases of *Garget* by administering one or two drops of *Aconite*. Have you, or any of your readers ever treated cattle after the Homeopathic system? I have for several years endeavored to do so—and considering my want of anatomical and physiological knowledge, with very encouraging success. I doubt not that some of your readers will smile, if not indulge in a hearty laugh, at this statement. All I ask of them is, that they would try the above remedy for the *Garget*, at the next opportunity. I have often used the garget root or poke (*Phytolacca decandra*) with success, but I always believed it had the effect of reducing the quantity of milk. *Aconite* does not have this effect.

Yours, &c.,
Concord, Oct. 11, 1853.

MINOT PRATT.

REMARKS.—That the poke root is a dangerous remedy in unskilful hands, we do not doubt, and is often the source of injury to the cow. We have practiced the homeopathic treatment with the happiest results. A friend informed us the other day that he once cured a case of blind staggers in a horse valued at three hundred dollars, by administering three doses of stramonium in the course of six or eight weeks. If this worst of all diseases in the horse can be cured, we believe any other may be. Try Mr. Pratt's remedy.

THE SEASON.

October, up to the 14th, has been unusually cool, wet and windy. During the early morning of the 9th, there was vivid lightning accompanied by heavy thunder and rain. Now,—the 14th—there is the beautiful October sun and calm, and appearances of Indian summer. The grass is still green and abundant, and as late as the 12th we have noticed hay-making going on. There has been, as yet, no severe frosts, so that cabbages and turnips are still growing rapidly. On the night of the 14th, there was the first heavy frost.

MUSKINGUM PEAR.

The fruit of which the above engraving is a portrait, was grown in the garden of Mrs. COLZ, widow of the late S. W. Cole, Esq. It is not yet common among us, and perhaps its merits are not fully defined. Mr. COLZ, however, thought it worthy a place in all good gardens. His description of it is that it is rather large; roundish to obovate; greenish yellow, with many dark specks, and much russet, seldom a brownish blush; stem long, medial, in a narrow cavity; calyx slight, open, in a slight or with no depression; flesh yellowish-white, very fine, tender, melting, juicy, of a sweet, high, aromatic flavor. 15th Aug. to 10th Sept. Native of Ohio. We find it perfectly hardy here and a great grower. Probably well adapted to a still more northern culture.

A PROLIFIC PEAR TREE.—The *Portsmouth Chronicle* states that in a garden in that city is a St. Andrew's pear tree, which has borne three crops of pears the present season, and is now in bud for the fourth crop.

EF A beautiful "Victoria Regia" flower was in bloom at Sayer's garden, Cincinnati, on Thursday last.

EXHIBITION OF HORSES AT SPRING-FIELD.

OCTOBER 19, 20, 21 AND 22, 1853.

This popular and important movement must not be forgotten. The improvement of our breeds of Horses is a matter of consequence, not only to the farmer, but to every other class of people. Only one horse in fifty in the country towns can be called a good animal. In the cities the proportion of good ones may be better, as they drain the country of the finest horses, both for speed and draft. Let us take hold of this enterprise "with a will," and make something come out of it that shall take the place of our diminutive, crooked-legg'd and weakened things called horses, that mope about hitched to our vehicles, and "drag their slow length along" our farms.

RULES AND REGULATIONS.

1. Horses intended for exhibition and premium, or for sale, should be entered with the Recording Secretary, H. S. Noyes, on or before Saturday, Oct. 15, 1853. On payment of the entrance fee, a check will be given, which must be presented when the horse is brought to the exhibition ground.
2. Horses intended for sale will be labeled accordingly, but cannot be withdrawn until the close of the exhibition, except by written permis-

sion of the Board of Managers, and there will be no return of freight money by the Railroads on all horses sold.

3. Pedigree, proofs of origin and age, must be furnished, if required, for every horse offered for premium.

4. A Board of Judges will be appointed to examine all horses entered, who will award premiums agreeably to the annexed list, which will be paid or delivered at the close of the exhibition.

5. All horses entered will be at the risk of the owners. The most effectual means will be taken, through the agency of the police and otherwise, to guard and protect the horses exhibited; but the Managers cannot be responsible for injuries that may be occasioned by accident or otherwise.

6. Owners or agents offering horses for premium or exhibition, will receive tickets of admission to the exhibition grounds, but in no case transferable.

7. The exhibition will occupy "Government Square," directly east of the United States Armory grounds, which will be properly enclosed for the purpose. Stalls for horses and seats for spectators will be provided; also, a suitable course for trials of speed and the display of horses.

8. Entrance fees will be charged as follows, viz:—

For all horses or spans of horses entered for premium, \$5; for all horses or spans entered for exhibition and sale, \$3; for each person, with privilege of seat, season ticket, \$1; for each person, single ticket, 25 cents; seats, 12½ cents.

9. Persons wishing for more particular information will address (post-paid) William Stowe, Corresponding Secretary and General Agent of the Exhibition, Springfield, Mass.

LIST OF PREMIUMS

To be awarded at the Great National Exhibition of Imported Blood and American Breeds of Horses, at Springfield, Mass., Oct. 19th, 20th, 31st and 22d, 1853.

STALLIONS.

For the best Stallion of 7 years and over,	
1st premium,	\$300
2d do.	100
3d do.	50
4th do. a silver goblet valued at	25
For the best Stallion of 4 years and under 7,	
1st premium,	\$100
2d do.	50
3d do. a silver goblet valued at	25

GELDINGS.

For the best gelding of 4 years and over,	
1st premium,	100
2d do.	50
3d do.	25
4th do. a silver goblet valued at	20

BREEDING MARES.

For the best Breeding Mare of 4 years and over,	
1st premium,	\$100
2d do.	50
3d do.	25
4th do. a silver goblet valued at	20

BREEDING MARES WITH FOAL BY THEIR SIDE.

1st premium,	\$50
2d do. a silver goblet valued at	25

MATCHED HORSES.

For the best span of Matched Horses of 4 years and over,	
1st premium,	\$100
2d do.	50
3d do.	25
4th do. a silver goblet valued at	20

FANCY HORSES.

For the best span of Fancy Horses of 4 years and over,	
1st premium,	\$100
2d do.	50
3d do. a silver goblet valued at	25

COLTS.

For the best Stallion of 3 years old,	
1st premium,	\$50
2d do.	25
3d do. a silver goblet valued at	20
Best Filly,	25
For the best Stallion of 2 years,	
1st premium,	\$25
2d do. a silver goblet valued at	20
Best Filly, do. do. do.	20
For the best Stallion of 1 year,	
1st premium,	\$25
2d do. a silver goblet valued at	20
Best Filly,	20

FARM OR DRAUGHT HORSES.

For the best pair of Farm or Draught Horses,	
1st premium,	\$50
2d do.	25
3d do. a silver goblet valued at	20
Best single do.,	
1st premium,	\$25
2d do. a silver goblet valued at	20

PONIES.

For the best pair of Ponies,	
1st premium,	\$50
2d do.	25
3d do. a silver goblet valued at	20

In addition to the premiums above stated, a liberal sum of money, with Medals and Diplomas, will be placed in the hands of the Committee on Premiums, to be distributed by them to such exhibitors as, in their discretion, they shall deem most deserving.

GEORGE DWIGHT, President,

JAS. M. THOMPSON, Vice President.

WILLIAM STOWE, Secretary.

For the New England Farmer.

THREE KINDS OF FARMERS.

BY A. G. COMINGS.

It has been said that there are three kinds of ministers in the church, namely, those whom God has made such, those that man has made, and those who were never made at all.

It is possible that there are three kinds of physicians, who may be known by classing as follows:—The physician who heals, the physician who kills, and the physician who lets his patients live or die as they will, without hindrance.

There may be three kinds of lawyers in the world, answering to the idea of the lawyer who serves his client, the lawyer who serves himself, and the lawyer who is of service to nobody.

These three make up the trio of "The learned professions." As we belong, just now, to the *unlearned profession*, the profession of a farmer, in which it is the privilege of the student to admit, whether others do or do not allege, that he is "an ignoramus," we will presume to say that in our profession there are also three classes, including the farmer who is a farmer, the farmer who is no farmer, and the farmer who cannot make a farmer.

As in a great many matters it is, that the last thing spoken of is the first thing to be considered, so we will have it in this, and take a little look at the man who can never become a farmer.

When we see a man who now has or has had some other way of making or of getting money,

and then turns to and lays out his money in large sums upon some little farm, from year to year, and yet gets small crops compared with the large expenditure, and thinks that by so doing he is a farmer; and if he gets a large crop at a very large cost that he is a *great farmer*, we remember a saying of Uncle Tim, that "That fellow never can become a farmer, no how."

Again, when we see a man who does nothing on a farm, not even to oversee the work of a farm, but is shut up from year to year almost, among learned essays and dissertations, all prepared to enlighten our dark corner of the professional world, we think what old father Blunt used to say when he saw such a thing. "Well now there," he would say, "that are is just the thing that can't be done no way, for that are fellow never can make himself a farmer."

The sum and substance, in simple and compound, of all this matter, is just this, as we look at it. The man who, with good health, and a good soil to work upon, cannot make his farm a means of real and positive income, without lessening the value of the farm, is no farmer. Still, he may overcome all these deficiencies, and if so, he can become a farmer. If he investigates principles, by his practice he will prove those principles, and be able thereby to improve his farming.

A farm which should be held at any valuation equal to a single red cent, must be a farm which can be made to produce, from year to year, a sufficient amount to pay for the labor of cultivating it—the cost of team work upon it, the wear of implements, the value of manures applied to it, the taxes, the interest of its cost or valuation, and something besides. A farm that cannot be made to do so much is worth *nothing*, only to help hold the world together.

We may consider a small farm as worth \$1000, and then put it upon debt and credit as follows:

FARM.—Dr.	
To interest on \$1000.....	\$60
Taxes.....	8
Team work, horse and oxen.....	50
Manure.....	40
Labor.....	150
Wear of implements.....	10

And the amount will be.....\$318

We may give credit to it as follows:

FARM.—Cr.	
To Hay.....	\$8
Corn.....	25
Potatoes.....	80
All other field and garden crops.....	60
Pasturing.....	20

And the amount will be.....\$295

Now suppose the owner to have his farm free of debt when he begins his effort at farming on such a farm, we may subtract from the debtors table the amount of interest on the \$1000 which it cost; and \$60 taken from \$318 would leave \$258. This would leave the farmer who purchases a farm at such a price, and cultivates it with such a return, the same as being without property and paying interest on a debt of \$883.33; for the expenses of his farm would be \$53 yearly more than the farm would pay.

There is a great deal of such farming. To this subject we direct attention, because farming for pleasure and not for profit is not making farming a business. The true farmer makes farming a business, not a play for his amusement. He must also make it a profitable business.

Most of the farms of New England are doubtless capable of being made profitable to the owners and cultivators. Many of them now fall far short of it. This marks and measures the defective state of our agriculture.

A true farmer is one who has become so well skilled in his business that he can make enough from the cultivation of a good-soiled farm to meet all expenses, pay interest, deal with all men without niggardly littleness, contribute an honorable share to the generous interests of the times, and lay up something with which to meet any extraordinary call, or do a necessary good deed at a moment's warning. Too little of our farming now meets this idea.

Mason, N. H.

For the New England Farmer.

ANTHRACITE COAL ASHES.

MR. EDITOR:—Can you inform a constant reader of your valuable paper, whether the ashes of Anthracite Coal, are of use for agricultural purposes? Can they be used to advantage on land moderately light? Are they good for trees? Should the coarser parts be sifted out before using?

An answer to these questions will greatly oblige one who has in vain attempted to obtain satisfactory information from his neighbors.

Newtonville.

REMARKS.—We have no doubt that the ashes of anthracite coal are valuable fertilizers. Where spread on somewhat low English grass land, fine results have been realized; about trees they keep the ground light and porous, and really add fertilizing matter, valuable to the tree, as will be seen by the analyses below.

The composition of the ash of anthracite will vary, of course, like that of the coal itself. The following analyses by Prof. Norton of Yale College, were made from several pecks of ashes, obtained from a grate in which the coal had been burned in the usual way, due precaution being observed not to intermingle the ash with any vegetable remains from the fuel employed in building the fires. The constituents of 100 parts of the ashes of white and red coal yielded of

	White Ash.	Red Ash.
Matter insoluble in acids.....	88.68	85.65
Soluble silica.....	0.09	1.24
Alumina.....	8.36	4.24
Iron.....	4.03	5.83
Lime.....	2.11	0.16
Magnesia.....	0.19	2.01
Soda.....	0.22	0.16
Potash.....	0.15	0.11
Phosphoric acid.....	0.20	0.27
Sulphuric acid.....	0.86	0.43
Chlorine.....	0.09	0.01
	99.98	100.11

These close and interesting analyses, says Professor Norton, afford us much light upon the constitution of coal ash, and enable the chemist who has studied these subjects to say at once and with confidence, that this ash is of some value as a manure, and should by all means be so applied in cases where it can be obtained cheaply.

In an analysis by M. KLAPROTH, he found coal

ashes to consist, almost entirely of the various earths, a small portion of charcoal, and the saline matters of which the sulphate of lime, (gypsum) and lime constitute about a fourth.

In some comparative experiments made by Lord ALBEMARLE, he found that as a top dressing for most of the grasses, there is no application superior to coal ashes.

In his *Gardener's Magazine*, Mr. LOUDON gives the statement of a correspondent, who says he "sowed on the 15th of May three rows of Swedish Turnip. No. 1, was manured with well-rotted dung from an old melon bed. No. 2, with the tops of cabbages just come into bloom. No. 3, with coal ashes. They vegetated about the same time, but the row manured with the cabbage tops seemed to suffer most from the drought; the season being hot and dry, they made little progress until the end of August, and in November they were a middling or rather a bad crop. The row manured with coal ashes had all along, a more luxuriant appearance than the other two. The rows were 20 yards in length, 3 feet apart, and 15 inches from plant to plant in the row. I took them up in February, and they weighed as follows: No. 1, 78 lbs.; No. 2, 88 lbs.; No. 3, 121 lbs.; which is very much in favor of the coal ashes."

We would call the attention of "M. C.," to this article, who inquired whether "coal ashes could be used with any benefit in agriculture;" on page 341 of last year's volume. We had not time then to remark upon it, and referred it to our correspondent. See also an article on page 474, same volume, by Mr. WILLIAM STOVER, of West Hartford, Ct., whose experience led him to the conclusion that coal ashes is valuable as a fertilizer.

MEADOW MUD.

Though urged so often, we must suggest again to the farmers the importance of getting up a large quantity of this valuable absorbent and fertilizer. Haul it upon the uplands ready for the corn land next spring, by placing a large shovel-full in each hill, mingled with a handful of guano.—*N. E. Farmer*.

Don't do any such thing. Dig the mud and make a pile, mixing a bushel of lime with each cart-load, which you have slacked with brine as strong as salt can make it. Use this substance in your stable to absorb the urine and gases. Don't put a handful of guano in the hill, unless you wish to kill your seed.—*N. Y. Tribune*.

REMARKS.—The *New York Tribune* has "travelled out of the record" in its teachings and comments on our suggestion as to the use of meadow mud. This is a fair specimen of the sort of teaching which discourages the farmer more than any thing else. Talk to nine-tenths of the farmers about mixing a cask of lime with each cart-load of muck, at a cost of \$1 to \$1.25 for each cask, and

this to be slacked with brine as strong as salt can make it!! What would the farmer's corn cost per bushel, with his manure made by this expensive process. No, no, no! Haul up the mud and let it freeze, and to a shovel full of it to each hill, in the spring, add a half gill, or a whole one, of good Peruvian guano, mix it thoroughly, and not a kernel of your corn shall be injured by it. We speak from our personal practice, as well as that of many about us. The *Tribune* must be in the harness and furrow a little longer, before its doctrines on these subjects can be considered reliable.

For the New England Farmer.

THE MONTHLY FARMER FOR SEPTEMBER.

So various and extensive are the subjects discussed by the editor and the numerous correspondents of the *Farmer*, that I am able to give only a bald index instead of a Review of its monthly contents.

ABROAD.

Agriculture in the Sandwich Islands, p. 398 : Eruption of Manua Loa, p. 399.

AGRICULTURAL COLLEGE.

Advocated by "J. H. R." Dorchester, in an article headed "Wants of Agriculture," p. 394. He particularly specifies "the variety of treatment required for the various kinds of soils—the proper mode of preparation and application of manures—the adaptedness of particular crops to particular localities, and the proper succession of crops," as subjects on which he anticipates a college would throw light.

ART.

Notice of taking views of Mount Vernon, to be used in an ornamental diploma of membership of the National Agricultural Society, p. 412.

BEES.

Notice of L. L. Langstroth's "Manual for Beekeepers," and of his Movable Comb Hive, p. 405; with an extract on p. 431 from the Manual, specifying some of the valuable peculiarities of his hive. Experience and suggestions on keeping bees, p. 401.

BIRDS.

Observations on the migration of Swallows, by J. D. Ward, North Ashburnham, p. 397, and by L. Durant, Derby, Ct., p. 410.

BOOKS.

Notice of an old one, p. 397, and of unworthy ones, p. 407. The latter ought to be more carefully "noticed" by parents. A taste for this kind of literature is as much to be guarded against as a taste for intoxicating drinks.

CATTLE.

On p. 417, a life-like engraving of the Ayrshire bull, Prince Albert, owned by Mr. Raynolds, heads an article on the Ayrshire breed. Mr. Hatch gives an account of his cow, a cross of the Alderney blood, p. 409. Two articles on the Garget—p. 400, the Cow Berry recommended as a cure; the other, p. 415, advises, first prevention, then free use of cold water, in which "A. W. C." p. 436, agrees.

CULTIVATION.

"Notes by the Way," on several farms in Essex county, p. 425. "Old Fields" is an earnest, sprightly written article on reclaiming exhausted rye fields, which, the writer hopes, "may at least elicit information from others." The succeeding article,—"Stubble Lands—The Roller,"—in which it is stated that an acre of well set grass land contains from "thirty to forty tons of soluble matter," better explains the sterility of pine plains, by the proportionate absence of this vegetable matter, than does the mineral theory on which the article on old fields is based. Laying down land to grass, with turnips, inquiries and answers, p. 406.

CURIOUS.

Bird's eggs in a cavity in the middle of a log, p. 408; battle between a hen and a rat, p. 406.

FRUITS AND FRUIT TREES.

For one, I wish to thank the writer for his lucid article, "An hour with a Budder," p. 396, which, with some remarks by the editor, p. 412, on the general principles and results of the art, will, I hope, induce many to attempt some improvement of fruits in sections where improvement is much needed. Two articles on Grapes—one against summer pruning, p. 407; and the other, p. 432, on the uses and value of the fruit. Inquiry for best sweet apple, p. 521; directions for drying peaches, and discussion by members of Massachusetts Horticultural Society on the cultivation of the Pear, p. 422; remarks on the Currant, with a cut of a bunch of fruit of May's Victoria; successful upland Cranberry culture in Danvers.

EXHIBITIONS.

Vermont State Agricultural Society, p. 400; List of State Fairs in 1853, and of County exhibitions in Massachusetts, p. 414.

EXPERIMENTS.

In manuring Peas, p. 415, and in growing the Marrow Squash, p. 419.

GARDEN.

Remarks on Earthing up Celery, by one who took the first prize of the Massachusetts Horticultural Society, last fall, p. 425; on trimming Tomato vines, p. 430; and on the medicinal and palatable uses of this fruit.

HIGHWAYS.

To a person who had been accustomed to the perplexities of street feeding that prevails in most of the States of the Union, the comparative absence of cattle in the highways of Massachusetts is a most pleasing feature. Where cattle are allowed to run at large in the highway, a quiet, peaceable neighborhood can hardly be expected; for encroachments upon the rights of neighbors are so frequent as to keep bad feelings constantly stirred up, as the result of disputes, quarrels, or litigation. The article, "Highways—a beautiful Feature," p. 404, gives us a picture of a highway that might be cheaply realized, but which is too seldom seen.

IMPLEMENTS.

H. F. French, Esq., gives a description of a trial of one of Ketchum's, and one of Emery's Mowing Machines, which he witnessed in Greenbush, N. Y. As many farmers are beginning to

think of mowing as well as raking by machines, this plain account of the practical operation of two different machines will be very acceptable—p. 396. In "Notes by the Way," however, we are told by the writer that, on the farm of Mr. Waters, of Beverly, he saw "a mowing machine, that had been operated a little, laid aside for want of skill in those who worked it,"—p. 426. Such failures, at first, are to be expected. David Lyman, of Middletown, Ct., has tried one of Ketchum's, and speaks highly of its operations,—p. 416. On p. 401, we find a cut and description of a Hoeing Machine, and on p. 433, are cuts of pruning and budding knives, and a Scraper. Good tools are certainly desirable; but I would caution boys against excusing themselves from acquiring a practical knowledge of budding and grafting on the ground of the want of the full card of knives here pictured out. The results of this art are so wonderful, that those who have never practised it are apt to suppose the process more difficult and complicated than it is. Many families of boys grow up to maturity without any practice, and often with the impression that there is some mystery in the art, that puts success out of their reach. Boys, and girls too, with nothing but ordinary pocket knives, a nice little "ivory" wedge made of some hard wood, and a single leaf of the *Farmer*,—"An hour with a Budder"—may, if they try, change worthless apples, plums, pears, &c., to the best fruit that grows in the neighborhood—and then buy better knives when they have opportunity. Garden and Fire Engines, recommended, p. 404. Notice of Ax making in East Douglas, p. 433.

INSECTS.

Tobacco liquor for the onion worm, p. 400; To prevent bugs from eating vines, p. 402; Three articles on the Canker or Palmer worm, by which it appears that it has been observed in small numbers for several years, in some places.

MANURES.

Leached ashes recommended for top dressing and for peach and apple trees, p. 396. But, say some hundred voices, at once, every body knows ashes to be good, and we use all we can get. Do you? If you have a swamp on your farm, read what Mr. Stevens says about making ashes, p. 423. Food for crops, p. 416, is suggestive, rather than dictatorial; calculated rather to set farmers to thinking for themselves, than to save them this trouble by specific directions. In the article on "Old Fields," p. 426, the theory of "Mineral Manures" is relied upon. The writer says, of our old rye-fields, "There is still vegetable mould; and the pabulum of other plants, than rye, still exist in sufficient quantities." Now, I supposed the very thing these old fields lacked was vegetable mold, and thought science confirmed this supposition. On page 88 of *Albany Cultivator* for 1845, is a table of analyses of specimens of several Kentucky soils, which, but for want of room, I would copy. The writer says, "The above analysis shows that all our old fields want is vegetable matter." Prof. Wells, of Cambridge, who devoted the summer of 1851 to analyzing the soils of Ohio, in the employ of the State Board of Agriculture, says the reason of the difference between the rich soils of Ohio and the poor soils of Massachusetts, "will not, probably, be found in their mineral constituents."—*Mass. Trans.* 1851, p.

237. Inquiries as to the value of Cow manure, p. 424.

MEADOWS.

On p. 402, 413, and 423, we find the details of successful meadow cultivation. A few years since, the farmers of Massachusetts hardly knew what to do with their meadows; now they would not know what to do without them.

MISCELLANEOUS.

"The Thriftless Farmer." "Hitching Posts" for horses, recommended instead of using shade trees and front fences for that purpose. "Rough Paint" for carts, fences, &c. "Saleratus." "Monthly Farmer for August." "Mr. Webster's Mansion." "Discoveries and Improvements." Hints on "Shelter." Comments on Swine, Breeding Sows, Sheep, Plowing, &c., p. 421.

POTATOES.

Of the four short articles in this number of the *Farmer*, three are suggested by the disease that has so long baffled the skill of the learned, and the experiments of the practical farmer.

ROTATION OF CROPS.

The natural tendency of the soil to a change of production, illustrated by facts in relation to the change of timber in forests, p. 395.

SCIENTIFIC.

"Action of Drought on Plants," an article from a London paper. Draining has been so universally recommended in English Agriculture, as the first and last requisite of good farming, that I had supposed its climate was so moist as never to suffer, as here, from drought. This article, however, says, "The present season has afforded abundant illustrations of the effect of the want of moisture on the several plants the farmer has to cultivate." "Ammonia," by Prof. Johnston, and "Laying down to Grass," by the same. "Analyzing Soils, Farming Science, &c.," is an article that shows up some of the extravagances that are put forth in the name of science.

THE SEASON.

In presenting "some of the aspects of nature about the farm in the first autumnal month," and reminding us there is still "work enough to do," the editor blends the poetical with the sterner duties of the season. It is well that he should; for the hard knocks, the sweats and freezes, one gets on a farm in our climate is apt to beat the poetry all out of a fellow. Vegetation generally is represented as unusually vigorous throughout New England, though apples will be scarce, and potatoes more or less rotten.

TRANSACTIONS.

Nos. 1 and 2, (p. 409, 417,) of a series of Articles on the Volume of Transactions of the Agricultural Societies of Massachusetts, for 1852, by one who has thus far manifested the right sort of ability for the somewhat difficult task he has undertaken.

WALKS. WARTS.

Recipe for making the one, p. 400, and for curing the other, p. 399.

Winchester, Sept. 15, 1853.

A READER.

OLD HORSES should be driven by old people. Till you have the rheumatics yourself, you cannot properly sympathize with the spavins of other people.

WORCESTER AGRICULTURAL FAIR.

The Worcester Agricultural Society held its thirty-fifth annual Fair in the city of Worcester to-day. The yard enclosed for the pens contains a little more than seven acres, and is located about half a mile west of the court house. It was purchased and prepared at an expense of something over \$4,000. The fence around the enclosure is about eight feet high, supported by substantial granite posts. The whole enclosure is perfectly level and in every way is a most convenient and appropriate spot for such a display. A spacious tent was erected within the southwest part of the enclosure, under which were the tables for the dinner, and the preparations for the address. This is the first time that the Society has made the experiment of charging a fee for admission to the fair, which on this occasion was only ten cents.

Fat Cattle.—Of these there were some fine specimens. We noticed particularly one pair of oxen by Mr. Fitch Winchester, of Southboro, one of which weighed 2315 lbs. and the other 2205. Others by Lewis Hastings, of Sterling, John Watson, of Princeton, Samuel Ellsworth, of Barre, were very good, and one very handsome pair of Durhams by Charles H. Newton, of Shrewsbury, weighed 4560 lbs. Mr. Harrison Bacon, of Barre, and Charles Bowen, of Worcester, exhibited some fine fat cows.

Stock.—Some fine bulls were exhibited in this department, among them the largest and most worthy of attention were one by John Park, of Millbury, of the Ayrshire breed, very fine; one by Phineas A. Beaman, of Princeton, a full blood Durham, weighing 1785 lbs. one by Lewis S. Taft, of Uxbridge, one fourth Ayrshire and one fourth Galloway, and one by Silas Bailey, of Boylston, a Devon three years old, weighing 1560 lbs. Of Heifers, Steers and Calves, there was a great number on the ground, consisting of Ayrshire, Devon, Durham and native breeds. Of Swine there was a very good number, principally of the Suffolk breed. Of Sheep there was only a small number, of Irishmixed, Merino, native and Dishley breeds.

Of poultry there was a fine assortment, composed of turkeys, ducks, shanghais, chittagongs and common barnyard fowls. Of the latter, a most beautiful collection was presented by Mr. J. H. Hero, of Westboro, called Bolton Greys. Some very handsome pigeons were exhibited by Mr. E. L. Bingham, of Worcester, seven varieties, and by Wm. C. Ripley, twelve varieties.

Of horses there was not a great number; one black colt of two years old, by Joel Richardson, of Templeton, attracted attention by his size and excellent training. He was driven in a buggy made by George Kenney, of Worcester. His weight was 1034 lbs., of the Morgan and Black Hawk stock.

Of agricultural implements there were none that we noticed except a large assortment of plows, feed cutters, &c., by Ruggles, Nourse, Mason & Co. Of butter and cheese, there were only about a dozen contributions of each.

THE PLOWING MATCH.

This commenced at nine o'clock, on land of Charles Hawdin, Esq. The soil was a light loam, a portion of which had recently been laid down in clover, and a portion having an older and closer

sward. Twenty-one ox-teams engaged in the competition, and two teams of horses, one owned by Charles Dresser, of Worcester, and the other by Leonard S. Wheelock, of Grafton. The plow used by Mr. Dresser's team, was Ruggles, Nourse, & Mason's No. 33 improved, a double plow, and the furrow was ten inches in depth. The peculiarity of this double plow is, that the small forward plow removes the upper surface of the turf, and the succeeding one throws upon it the soil which it turns up. It has been proved by experiments with the dynamometer that ten per cent. less power is required by the use of the double plow than by a single one, plowing the same depth. The amount plowed by each team was about one-thirteenth of an acre, and the depth required to be plowed was seven inches. There was one plow only of Prouty & Mears, No. 85, seventeen of Ruggles, Nourse & Mason, of different numbers, and four of Martin's.

The time occupied in plowing was from twenty-nine to forty-four minutes. The work was well done, with little noise and whipping on the part of the drivers. The regulations for preserving order under the direction of the Committee, of which Otis Adams, Esq. of Grafton, was Chairman, were excellent and well observed.

Immediately after the close of the plowing, a test of drawing by working oxen was made. For this purpose, two carts loaded with stones were prepared, weighing with their contents two tons. The contest was conducted by the committee on working oxen, Daniel Lee, Esq., of Barre, Chairman. About thirty teams were entered as competitors. The carts were located at the base of a hill rising at an inclination of about four degrees. The teams were required to draw the load to the top of the hill, a distance of about two hundred feet, and back again to a line at about the middle of the hill, where they were required to stop and try their power in backing the load up the hill.

There were nine persons who competed in a drawing match with three year old steers.

This part of the exhibition attracted much attention, and exhibited a degree of good training on the part of the cattle of Worcester county, not to be excelled any where. We could not but notice a marked difference between the cattle of the Durham breed and others in their respective execution of backing the cart up the hill. In this the Durhams were awkward generally, and in no instance that we noticed, doing the work with the promptness and directness of the native breeds.

THE DINNER.

Tables were prepared for about three hundred and fifty persons under the tent within the enclosure. These were placed at one end of the tent, leaving about three-fourths of the space unoccupied. There was in nothing, connected with the Fair, such an apparent want of preparation as in the arrangements for dinner. This was owing, doubtless, to the inauspicious state of the weather on the previous day. The company sat down at two o'clock. The Divine blessing was invoked by the Rev. Horace James, of Worcester, chaplain of the day. Among the distinguished gentlemen at the table we noticed Ex-Gov's Lincoln and Boutwell, Dr. Stephen Reed, of Berkshire county, Gen. Thos. Chamberlain, Hon. Stephen Salisbury, Rev. Mr. Paine, of Holden, and Charles L. Flint, Esq., Secretary of the Board of Agriculture.

THE ADDRESS.

The Hon. Isaac Davis then congratulated the Society on its prosperity in possessing the ground on which the Fair was held, and on the fact that they would by another year possess in addition two large halls, 75 by 55 feet in dimensions. He then introduced Gov. Boutwell as the son of a Worcester county farmer, and one who, though educated in the people's university, the common school, had managed one of Uncle Sam's large farms successfully for two years.

Mr. Boutwell commenced by saying that the occasion was thrice blessed; in the general abundance of the harvest, the quiet beauty above them, and the glorious landscape spread around. He craved indulgence in speaking upon an old theme. Agriculture was to be considered in its relations to the individual men engaged in it, and to the country or great community of interests. Success in any department was a magic word. The success of the farmer was not mere gain; he can never count his gold by millions though he may acquire a competency. The difference among wealthy men in the amount of success they secure is ideal. Let the farmer have health, a sufficient quantity of land, taste, industry, perseverance, system, science, experience, learning, love and respect for his calling, churches and schools, patriotism, and finally, that happy competency which neither oppresses with fear of want or fear of loss, and he is a successful man.

He went on to speak at length of the necessity of learning and experience for the fullest success, and said that agriculture, more than any other branch of industry, was dependent on the past. It was an ancient science, and it was reasonable to suppose that something might be gleaned from ancient writers on the subject, whose maxims were the result of their experience. The successful men would be the men of system. This was illustrated by the old maxims, that a rolling stone gathers no moss, and that he who runs seldom rides. Men of system never roll nor run, but pursuing steadily the great idea of their lives they succeed. There is less of system in agriculture than in any other department of labor in New England.

He spoke with great disapprobation of the disposition of farmers to acquire very large farms, and of the desire to migrate to the West to gratify that disposition. Gentlemen who are desirous of migration there for such a purpose, should be reminded that though the West has many attractions it is not altogether a paradise. He who has a home, whether his acres be broad or not, in the presence of New England schools and churches, and under the influence of an advanced and advancing civilization, is among the favored men of the country or the world. Mr. B. dwelt at considerable length on the evil of allowing the perpetual donation by will, of large estates for founding charitable or other institutions, regarding it as equally pernicious with the laws of primogeniture in England.

He entered also quite fully into the necessity of free trade for the prosperity of the farmer. The address on the whole, we thought too metaphysical for his audience, having less of that practical bearing than was desirable, though evincing great ability and an earnest conviction of the importance of its subject.

Dr. Stephen Reed, of Berkshire county, was

then introduced, who spoke briefly, expressing his gratification of what he had witnessed of the success of the farmers of Worcester county.

Mr. Flint, Secretary of the Board of Agriculture, then spoke at considerable length, expressing his gratification at the prospects of the Worcester Agricultural Society and the exhibition which he had witnessed, and closed by giving the following sentiment:

The Progress of Agriculture—May the enthusiasm of our farmers never be less than it is to-day.

The Committee then made their reports, and announced the premiums awarded.—*Traveller.*

AN IMPORTANT MOVEMENT.

AGRICULTURE can never take its true position among the arts until its condition is better understood. We will say nothing of it at present on its scientific relations, but call the attention of the reader for a moment to the deplorable darkness which enshrouds its statistics, and involves what all ought to know in doubt and uncertainty. It is believed that the cotton and woollen manufacturers of the commonwealth would be able to state with accuracy within a week, the whole number of yards they produce of cottons and woollens, in all their varied names and styles; and that the shoe manufacturers, and most of the mechanics, could also make satisfactory returns of the products of their industry, at any moment when required so to do.

But it is not so with the *farmer*. In our staple crops, we can only approximate the true condition. Who can tell the average, per acre, of the corn, potatoes, wheat, rye, barley and oat crops, and the average cost of each, per bushel, through a series of five or ten years? Who knows how many milch cows there are in the State, in the aggregate? to ask nothing of what breeds and of what value they are. Without settling this preliminary inquiry, it is vain to ask what the product of milk, butter and cheese is, throughout the State. Who can tell the cost of beef, per hundred, or of pork, or mutton, so that the farmer, finding the average price in the market for a series of years, can have certain data upon which to estimate his profits? or whether it will answer at all for him to engage in this branch of husbandry? How many farmers, when they sell their stock alive, have any definite idea of the shrinkage which should justly be deducted, so as to leave them the fair weight to which they are entitled? And so of numerous other questions not enumerated below.

We take great pleasure in laying the circular which follows before our readers. It will be of importance to those in other States, as it may be suggestive of similar operations among their own people. We hope every person to whom it has been sent, will promptly and faithfully respond to these inquiries of the Secretary. Alone and single handed, his efforts, though ever so well-timed

and strenuous, can advance but little the great cause in which we are engaged. The information desired lies among the people, and must come through them to some official centre, where it may be collated and there scattered broad cast through the States.

Much of the information desired may be obtained from the books of the Assessors in the several towns, and what cannot be got at there, we trust the friends of the cause will use every proper exertions to supply within the time specified. If gentlemen to whom this circular has been sent cannot attend to it they should place it in the hands of some person who will.

BOARD OF AGRICULTURE,
Secretary's Office, Boston, Sept. 1st, 1853.

DEAR SIR:—I desire to obtain from each town in the State, such facts and statistics as will enable me to make an accurate statement of the present condition of our Agriculture.

Any aid which you may be able to render me, either of your knowledge, or by interesting other intelligent and observing men to furnish me with the desired information will be gratefully acknowledged.

Your attention is more particularly called to the following inquiries, with such other suggestions and observations as may be interesting and useful to your town, and to the friends of Agricultural improvement throughout the State:—

1. What are the chief products of your town?
2. The estimated number of acres devoted to each?
3. The average yield per acre of Grain and Indian Corn?
4. What attention is paid to raising field crops of Beets, Carrots, Ruta Bagas, &c., and what is the average yield per acre, of each?
5. What is the average yield per acre of English Hay?
6. The increase per acre, within the last ten or fifteen years, arising from improved cultivation, or from reclaiming meadow and waste lands?
7. The estimated number of acres of reclaimed land?
8. Is there an increasing or decreasing number of acres in tillage?
9. Is there an increasing or decreasing number of acres in pasturage?
10. Is the value of farm land increasing or decreasing?
11. What is the estimated per cent. realized on the value of farms, and the capital invested in the management of the same?
12. The estimated number of acres of woodland, and the average value per acre?
13. The estimated rate of increase or decrease of woodland?
14. What Manures are chiefly used, and how applied? What attention is paid to composting, and what is believed to be the most profitable mode of doing it?
15. What per cent. increase of Manure might be made on your farms, with reasonable care, and by what means?
16. What degree of attention is paid to the breeding of stock?
17. What breed of Milch Cows and Working Oxen is most esteemed?

18. What is the average quantity, per day, of Milk and Butter from a single animal of each breed of Cows?

19. What is the number of full-blooded animals of each breed of Horses, Cows, Sheep, Swine, &c.?

20. What are the principal breeds of Sheep, and what is their average value per head?

21. What are the breeds of Swine most esteemed, and the comparative value of each?

22. Is it supposed that Pork can be raised with profit in your town?

23. What is the amount of Tobacco raised in your town?

24. What quantity of Cranberries is annually gathered?

25. What attention is given to the cultivation of Cranberries, and what is the estimated yield per acre of the cultivated and uncultivated?

26. What quantity of Broom Corn is raised?

27. What attention is given to the cultivation of Fruit, and with what result on the increased profits of the farm?

28. The estimated proportion of native and foreign laborers employed on your farms, and what is the average pay to each class per month?

Will you oblige me by answering as fully as possible before the first of November?

Very respectfully, your obedient servant,

CHARLES L. FLINT,

Secretary of the Board of Agriculture.

For the New England Farmer.

THE FRAMINGHAM AGRICULTURAL SOCIETY.

The annual exhibition of the above society was held in Framingham Centre on Tuesday, 27th inst.

The plowing match came off at 9 o'clock, with both horse and ox teams, and the work was done remarkably well. It must have been a difficult matter, however, for the judges to decide who were entitled to the premiums. On the ground, we noticed a sample of the old-fashioned plowing, done by a plow of "76," drawn by three yoke of oxen, accompanied by four men to drive and hold the plow; the whole was quite amusing, and gave a practical illustration of the advance made in this branch of agriculture. The exhibition at the pens was very fine, especially for the milch cows, heifers and bulls; there was a fine full blood Jersey bull, that took the first premium; also, a fine Ayrshire and two Devon bulls; there were many fine cows of the Jersey, Ayrshire, Devon and native breeds, that were much admired. A gentleman who had just returned from the Vermont and New York State Fairs, remarked that he saw there no such fine animals of these breeds; also, that our apples, peach and some other fruits were superior to what he had seen exhibited there.

The address was delivered in the Orthodox church, by the Rev. Samuel Robbins, of Concord, and was attentively listened to, the audience appearing much pleased with it. The dinner at the Town Hall, came off at two o'clock; the tables were well filled, the larger proportion of the company being ladies. Speeches were made by the President of the Society, the orator of the day, the Rev. Mr. Bodwell, Messrs. L. Sabine, O. R. Train, J. W. Clark, and others; and the whole affair passed off very satisfactorily to all concern-

ed. We heard many regrets that the Editor of the *Farmer* was not able to be present on the occasion to judge for himself, what progress the farmers of this portion of old Middlesex had made.

A LOOKER ON.

NORFOLK CO. AGRICULTURAL SHOW,

AT DEDHAM, MASS.

Notwithstanding the unpleasantness of the weather Wednesday morning, there was a numerous gathering of the sons and daughters of old Norfolk, to witness the festivities of the Fair, and the hall of exhibition has been thronged by visitors. There have been a number of additions to the display of horses, cattle and poultry, since Tuesday; although, undoubtedly the rainy weather has had the effect of discouraging many from making entries. No sheep were exhibited. We have already alluded, in a previous report, to the fine display of fruits, flowers and vegetables, which occupied a portion of the lower hall. The remainder of the apartment was partitioned off from the main room, for the use of the ladies' fair, the produce of which was to be devoted towards the payment of the new building. The ladies' fair was, perhaps, the chief point of attraction in the exhibition. It was crowded from morning till night, by individuals desirous either of purchasing some of the innumerable articles of utility, chiefly needle work, with which most of the tables were covered, or to partake of the substantial meats and delicacies which graced the boards; or, what perhaps was quite as powerful an attraction, to take a peep at the fair venders, who were stationed behind the tables. The Dorchester ladies had taken an active part in providing these arrangements, and many representatives of that town were present. One corner of the room was devoted specially to the accommodation of Moll Pitcher, who reclined at ease under an evergreen bower, and expounded fortunes to the curious passers-by. On the outer wall of the ladies' apartment was the following inscription:—

["The world was sad, the garden was a wild,
And man, the hermit, sighed till woman smiled."

Before we leave the exhibition building, we would also notice, among the display of domestic manufactures, some elegant designs for paper or prints, executed by Miss Olive C. Guild, of Dedham. We hope to see more specimens of the kind next season.

It was anticipated by many, that the unfavorableness of the weather which prevailed would cause delay in all or most of the proceedings of the occasion. But those who entertained this opinion were not aware that Mr. Thomas Adams, of Roxbury, was Chief Marshal—a gentleman who is noted abroad as at home for his prompt and faithful performance of every duty which falls to his lot. Under his generalship everything throughout the day was accomplished with great regularity, and in excellent time.

Half past nine o'clock was the hour appointed for the plowing-match to come off. Twenty teams were entered for the trial, comprising eight ox, eight double ox, and four horse teams. At the appointed time they started from their stations, and although the sod was rendered stiff and heavy by the rain, the task was in all cases speedily accomplished, and generally in a very handsome and creditable manner. The premiums which are giv-

en below, will show the respective merits of the teams.

The spading match was certainly the most exciting, if not, indeed, the most interesting of the trials. It took place at half-past ten o'clock, immediately upon the conclusion of the plowing match. The ground was marked off into 13 lots of 100 square feet each, and every lot was occupied by a stout Irishman, who, with shouldering spade stalked, to and fro. A triumphant smile wreathed the lips of each adventurous man, as if, in anticipation, he already enjoyed the reward of a hard earned victory. Firmly grasping the handles of their agricultural weapons, they awaited, all eager for the fray, the signal which was to usher them to glory, or to defeat. The signal was given by the band—it was the Roxbury Brass Band, by the way, which performed on the occasion—and off they started. Brandished by such powerful hands the spades did wonders. The heavy sods disappeared like snow in the morning sun; and big drops of perspiration dripped from the faces of the workers, and watered the earth whereon they trod.

"They dug like brave men, long and well."

Excitement was intense, and bets ran high among the bystanders. Such spading was surely never seen before in New England. The task of the last man was accomplished in about half an hour from the time of starting.

At half-past eleven the drawing match occurred, but a few rods from the scene of the other performances, on the Boston road. The place selected for the trial was an elevation, where the road ascended at an angle probably of three or four degrees. But four teams were entered for competition. They belonged to Messrs. Timothy Tucker of Milton, B. V. French of Braintree, A. D. Weld of West Roxbury, and George Babcock of Brookline. The task required the drawing and backing of a load 4000 pounds in weight up the before mentioned hill. It was accomplished by the oxen with comparative ease, and in very handsome style.

At a few minutes before 12 o'clock, a procession was formed at the exhibition hall, and marched to Rev. Mr. Lamson's church, where an address was expected from Rev. F. D. Huntington, of Roxbury. The church was filled, the galleries being lined with beautiful ladies, who smiled their favors upon the fortunate crowd beneath. A voluntary from the choir introduced the services. Hon. Marshall P. Wilder then briefly but eloquently addressed the congregation. The divine blessing was next implored by Rev. Mr. Babcock, of Dedham, and an original hymn, composed for the occasion by Rev. Wm. P. Lunt of Quincy, was sung. The orator of the day, Rev. F. D. Huntington, was then introduced by Mr. Wilder.

Mr. Huntington proceeded to deliver a remarkably beautiful, eloquently written address, of more than an hour in length; during that time the thoughts of the audience were riveted wholly upon the words of the speaker. His remarks were of a nature calculated to do good among those for whose benefit it was intended—to awaken the farmers to a just sense of their responsibilities as men, and to incite in them the ambition and energy to act. The school house, the church, the town hall, and the homestead, were made the text of his remarks, and they fur-

nished topics for much useful and interesting instruction and advice to the assembled farmers.

We have before us a full report of Mr. Huntington's address, but an unavoidable press of matter obliges us to refrain from publishing it. A voluntary by the choir succeeded the oration, and then a benediction was pronounced by Rev. Mr. Samson.

A procession was again formed, and marched two by two, in a pouring rain, umbrellas up, to the dining hall, which was in the upper part of the new building erected by the Society. Here their hearts were gladdened by the sight of a bountiful collation, which had been provided for a thousand people, by Mr. Howe, well and generally known as the courteous host of the Phoenix House in Dedham. After being seated, divine blessing was invoked by Rev. Mr. Sewell, and then began the joyful clatter of knives and forks. The dinner was an excellent one, and ample justice was done to the viands by the hungry crowd. After the sharp cravings of hunger had been satisfied, the reports of the Committees were read.—*Journal*.

KEEP THE FARMER'S FESTIVALS PURE.

We agree most heartily in the opinions expressed below by the editor of the *Union Democrat*, at Manchester, N. H. These autumnal festivals have, in a great measure, taken the place of the musters, which at length became so corrupt, so evidently the hot-beds of vice and pollution, that they were suppressed simply by the common voice, without the aid of legal enactment. There is enough at these Agricultural Fairs to engage the whole attention of thinking and sober-minded people, in the articles exhibited, and the address and speeches, and in the cultivation of social intercourse and brotherhood of feeling among themselves. We should be glad if circus companies, showmen, pedlars, auctioneers, &c., made no part of the collection on these occasions. We would, at all hazards, keep out every species of dissipation, either by gambling, drinking or betting, and everything else that should have the slightest tendency to corrupt the heart. We would have the orators, on these occasions, selected as far as possible from among the farmers themselves, or at least from those who own and are engaged in cultivating the soil. Political matters have already been incidentally introduced, and on one or two occasions have well nigh broken up the harmony and usefulness of the exhibition. We forewarn our friends of these dangers. The advent of these Fairs need not be heralded with trumpet-tongue abroad; all they need is a fair notice. If they are worthy of attention, and well-conducted, they will gain the popular favor—it is not, let them sink into oblivion.

We protest against this attempt to degrade the State Fair to a level with the monstrosities and nostrums of showmen and pill-making. It will be no humbug. The citizens of Manchester are doing, and will do everything which can be done to promote the success of the enterprise, and the

comfort of those who may attend ; and we trust no one will be deterred by the eager zeal of this ill-advised correspondence.

Another thing ;—we think a great mistake has been committed by renting the ground to a Circus Company. The exhibition of big oxen, and of supple Jacks, are entertainments totally incongruous, and the managers of the Fair, so far from being under obligations to supply "fun for the million," ought rather to exclude everything which may interfere with the sober, noble and ennobling purposes of the Exhibition.

ESSEX COUNTY AGRICULTURAL FAIR.

The thirty-fifth annual exhibition of the Essex County Agricultural Society was held in the city of Lawrence during Wednesday and Thursday, Sept. 29th and 30th. This institution is one of the oldest and most useful of the kind in the State. Since its formation it has been the means of materially improving the condition of agriculture in the county. Its results are manifest in the light and effective agricultural tools—so different from the awkward and heavy implements of forty years ago ; they are apparent in the more productive farms ; in their rich fields of waving grain ; in the excellence of their stock ; and in the comfortable dwellings and increased prosperity of the farmers themselves.

The exhibition of domestic manufactures, fruit, vegetables, &c., &c., took place in the City Hall building, and was replete with interest. The sides of the room were hung round with beautiful specimens of quilting, patch-work, &c., affording ample evidence that the fair ladies of Essex County are in the habit of employing their leisure moments in a profitable manner. There was an extensive show, also, of magnificent fruit—embracing most of the choicest varieties of pears and apples. Turning to the western side of the hall, the visitor was reminded that harvest and seed-time have come among us ; for the eye revelled upon rich piles of golden corn and squashes, mammoth cabbages, melons, &c.,—enough to provision a regiment for a week. There were many beautiful specimens of embroidery on the tables, and some finely executed pieces of drawing. In front of the stage was arranged the flower table, which was literally covered with the most beautiful of Flora's offerings, arranged in every imaginable tasteful style.

The Cattle Show came off on the green fronting the City Hall. Preparations were made for the reception of stock Wednesday ; but owing to the rainy weather, a comparatively small amount was brought in. Thursday, however, the show was very respectable. The pens contained some fine horses, and an extensive array of noble looking cattle. There were many porkers of all sizes, sexes and ages, on exhibition. They were chiefly representatives of the Suffolk breed. Of poultry there was a good display, including nearly all the fancy breeds ; and, judging from the crowd which throughout the day attentively regarded their doings, they formed by no means the least attractive part of the exhibition.

The Plowing Match was an interesting feature of the day ; and at the time appointed for its commencement a large gathering of people had assembled at the spot assigned, which was a field

near the Shawsheen House, on the Andover side of the river, about half a mile from the depot. Twenty-eight teams competed for the prizes. They comprised 14 double ox-teams, 9 single teams, and 5 horse-teams. The plowing was accomplished in beautiful style. As the brutes snuffed the pure cold air of the morning breeze, they seemed to inhale with it an unwonted vigor, and to step off to their labor with redoubled energy and strength. Although the ground was not well adapted to an exhibition of speed, the tasks were all accomplished in remarkably quick time.

The Drawing Match took place near the bridge over the Merrimack, on the Andover side of the river. The trial consisted in drawing and backing a heavy load of stone, 2100 pounds in weight, up a considerable ascent in the road—a distance of about 250 feet. As the road was in a muddy condition, the task was no inconsiderable one ; but it was accomplished generally, by the six or eight teams which essayed a trial, with apparent ease. The driving, too, was admirable—showing that in the art of managing their oxen the farmers of Essex are unsurpassed, and perhaps unsurpassable.

At 12 o'clock a procession of members of the Society and invited guests was formed at the City Hall, under the auspices of Col. Coleman, chief marshal of the day, and marched to the Lawrence Street Church, there to listen to an address from Joseph S. Cabot, Esq., well known as the President of the Massachusetts Horticultural Society.

The services in the church were opened by a voluntary from the choir. A hymn of "harvest time" was then sung to the beautiful air of "The Ingleside." Rev. Mr. Harrington, of Lawrence, offered a fervent prayer, and the address was next delivered by Mr. Cabot.

Mr. Cabot's address was one of a high order of merit ; it treated of agriculture as a chief element of political prosperity, and gave much useful advice and information respecting the practice of both agriculture and horticulture. It was a *practical* lecture, and one excellently adapted to excite a generous rivalry in the breasts of those farmers who were present, and to incite them to redoubled efforts in the pursuit of their honorable vocation.

Mr. Cabot's address occupied about three-quarters of an hour in delivery, and was very attentively listened to on the part of the audience. At its close a hymn was sung by the choir, and then the assembly, forming a procession, proceeded to the dining hall. About two hundred persons were seated at the tables, which were furnished by O. B. Melvin, of Lawrence. Before partaking, the dinner blessing was implored by Rev. Mr. Harrington. After the conclusion of the repast, brief and eloquent remarks were made by Messrs. Lawson, of Lowell ; Henry F. French, of Exeter, N. H., President of the Rockingham Agricultural Society ; Charles H. Flint, Secretary of the State Board of Agriculture ; Mr. Buckminster, editor of the *Ploughman* ; Mr. Dodge, of Sutton, member of the Board of Agriculture ; Mr. Howard, of the *Cultivator* ; Dr. Reynolds, of Concord ; Rev. Mr. Harrington, of Lawrence ; and the Hon. President of the day, Col. Moses Newell.

At half-past three o'clock, after having passed a very pleasant social hour together, the dinner party again formed in procession, and proceeded to the church to listen to the reports of the several committees.—*Journal*.

HILLSBOROUGH FAIR.

The Hillsborough County, N. H., Agricultural Society, held its fourth annual Fair at Milford, on Wednesday and Thursday of last week, the 28th and 29th Sept. The first day was too stormy to attend to any of the exercises announced in the bills, and the officers improved the time in filling vacancies in the committees, and then waited with some impatience for a brighter sun and clearer skies. The ladies looked wistfully from the windows and pitied the men drenched with rain and bespattered with mud.

Thursday morning, the sun showed his jolly face somewhat reluctantly, but the north wind came down with power from the hills and swept away to the south the vapors which hung over the valleys. This infused new life into the whole population, as well as new mettle into the horse's heels; for while the sun was bright, the breeze was fresh, cold and elastic. Men turned up their coat collars, boys hid their fingers in their trowsers pockets, and roses suddenly bloomed on the cheeks of the girls. Down the hills, around the hills, and along the banks of the serpentine and beautiful *Souhegan*, the living tide came pouring in. The charming village of Milford was thronged. All was bustle and delight. Every body forgot their pains and cares, if they had any, while health flushed on every cheek, and each one seemed to regard his neighbor with new interest and pleasure. Pedlars flaunted gay ribbons, bakers tossed about thier gingerbread and buns, and a jolly son of Neptune, cried, "here's your hot oysters, *fresh* from the salt water, ninepence a large bowl, hot oysters and—" but the breeze bore away the concluding words, and what were the grand accompaniments of those tempting "ninepenny bowls," we have never learned.

The "*good time*," of which the philosophic and hopeful have so often spoken, *has come*. No contrivance of man has ever introduced a more prolific source of happiness than these annual gatherings of the farmers, or one containing in a greater degree the elements of national prosperity. In connection with the *Fire Companies*, it has even now shorn the military spirit of nearly all its laurels, and instead of pointing their hose at towering steeples or into vacant space, we anticipate the day when all this human toil will scatter its fertilizing streams upon the famishing earth! Would there not be just as much fun in refreshing the plants and soil of a garden? Or would the utility of the thing dissolve the charm?

But the teams are moving. All along the hillside, up an hundred feet from the bosom of the *Souhegan*, men, women and children are standing in the sunlight, deeply interested in the success of their husbands and lovers below.

Where was Barnum, or Gleason? One of the most picturesque and beautiful scenes imaginable

has probably been lost to the world for the want of an artist.

The plowing was well done, but with too much hurry and use of the whip. This part of the exercises, we take it, is not to show in how quick a time an eighth of an acre may be plowed, but to exhibit the skill of the plowman, the discipline of his team, and how well he can perform the task in such an amount of time as he could afford to devote to similar work on his own farm. This error prevails in a greater or less degree, at all the exhibitions which we witness, and ought to be corrected.

In the great tent there were samples of fine apples, pears, peaches, plums, and grapes, but in limited quantity. Some of the vegetables were very fine; but as we took no notes of anything we cannot particularize. Many of the specimens were enormously large, and probably coarse and spongy. The best fruits and vegetables are such as are fair, of middling size and would be convenient and profitable for the table, always regarding their eating qualities. We are confident that the persons who contributed many vegetables which we saw, never would put such into the pot for their own eating. But we would have these freaks of nature presented and marked for exhibition only—not for premium. The worsteds, and other manufactured articles, did credit to their contributors. Several carriages manufactured by Mr. KENNY, of Milford, were fine specimens of good taste and good workmanship. Some *burial cases*, appropriately lined, made of cast iron, at Nashua, were a new feature in these exhibitions. In the midst of our enjoyments, they struck a new chord, reminding us of the time when we shall

"Have plowed our last furrow,
And reaped our last grain."

There were many other things which we have not space to enumerate, giving evidence of industry, intelligence and good taste.

There were present some *sixty* or *seventy* pairs of working oxen, and out of that large number there was not a pair which a good judge would pronounce inferior; and what was remarkable, there was scarcely a tinge of foreign blood in them at all. Occasionally the dark mahogany color, the peculiar mark about the nostrils and the spreading horn, indicated the Devon blood. One or two pairs of steers showed the Short Horn blood. Such an exhibition of working oxen goes far towards convincing us that, with the same attention that imported stock receives, our native cattle cannot be excelled. There was more of a mixture in the milch cows, which were not numerous, and with one or two exceptions, not remarkable.

The Address was by Mr. PROCTOR, of Danvers. It was delivered in a quiet, yet emphatic manner, and with his accustomed clear enunciation. It spoke of the practices, wants and hopes, of the

farmer,—summed up opinions of practical men on important points of husbandry, and was altogether of a decidedly useful character. It was one of those productions which will live in the memory of those who heard it, and upon which they can profitably fall back in their daily labors on the farm,—and this is what we want. Fine, open theories, loose speculations, and all allusion to political matters, are entirely out of place in these gatherings.

At the dinner-table there was a large collection, including ladies; short addresses were made by the President of the Society, BROOKS SHATTUCK, Esq., of Bedford, by Mr. PROCTOR, Mr. BEARD, of Nashua, and Mr. BROWN, of Concord, Mass. One beautiful and encouraging feature of the exhibition, was the presence of a large number of ladies, at the plowing, the dinner-table and in the church. We feel sure of success so long as this feature prevails. Although there was not perfection, there was no room for fault-finding, in any department of the Show. The arrangements were well digested, the music, by the Milford Band, very fine, and the escort by the Fire Company, imposing and pleasant; the dinner was good, and a good deal damaged before we were done with it; the ladies were smiling and the men good-natured, and there was no rioting, drunkenness or vulgarity to be seen or heard; and thus has the "GOOD TIME COME," which has been predicted. We wish them all—including the young women in the cars, with the delectable babies, who thought their cherubs ought to have a premium—(and we thought so too)—we wish them all prosperity—and long life, even to that delightful period when

"The land unplow'd shall yield her crop,
Pure honey from the oak shall drop,
The fountain shall run milk;
The thistle shall the lily bear,
And every bramble rose wear,
And every worm make silk."

~ For the New England Farmer.

THE MARROW SQUASH.

FRIEND BROWN:—In the Sept. No. of the *Farmer*, M. TENNY, of South Groton, asks some of your correspondents to give him information about cultivating the marrow squash. For the information of friend Tenny, I will give you my experience in raising them. My neighbors can testify to the quantity as well as quality of my squashes and other vegetables. Much depends upon the manner of planting squash seeds, as well as all other seeds, to ensure good crops. Every man's motto should be, "work the soil deep," and with the blessing of God, I shall have vegetables to sell and to keep. When I have planted my squash seeds after the following rule, I have never failed of having been well paid for my labor, viz.:—Dig the holes 16 or 18 inches deep, three feet broad and seven feet apart; throw the top soil one side, and the bottom soil on the other side of the holes. After digging as many holes as I wish to plant hills, I return the top soil to the bottom of the holes, and then take one bushel or more of well

pulverized manure, one peck leached ashes, for each hill, and with a spade or shovel mix well together from top to bottom. Then plant the seeds, leaving the top of the hills level with the surface of the ground, and keep them so during the season. When they are up, and the bugs have done troubling them, thin them out, leaving two or three stocks in each hill, which will cover the ground before the summer is ended. I intended to have said something about planting and raising other vegetables, but will leave that for another paper.

Yours truly,

ANSEL HOLMAN.

GRAFTON COUNTY (N. H.) CATTLE SHOW AND FAIR.

LEBANON, Sept. 23, 1853.

Eds. Traveller:—It rained yesterday, the first day of the Fair, incessantly, and the natural consequence was that a great many, undoubtedly the majority of those who had made arrangements to go with their beast and products, did not go, and so nothing was done; and though the weather was fine to-day, those who would have gone were deterred, from the rule adopted that all articles must be entered on the first of the two days. Sorry I am, therefore, for the necessity of sending you a poor account of the Show.

The spacious Common in Lebanon village was for three-fourths of its surface enclosed, furnishing ample room for a trotting course, and pens for beasts, and the old meeting-house for manufactures in the lower story, and the upper for speaking. Besides this accommodation, a large tent was erected in the centre, a hundred feet in diameter, for fruits, implements, machines, and so forth. In this, Bond's Cornet Band was stationed, and contributed rich music. The arrangements and preparations were excellent, but the rain, like the thunder at Wolf's Crag (Bride of Lammermoor) spoiled all. This was the more to be regretted as the previous fairs of this county have been very spirited, and have unquestionably exerted a happy influence on the agricultural interests.

Still there were some things of interest. Sixty pairs of working oxen were driven into the enclosure in one team, and they were a fine spectacle—all strong, well built, and well conditioned animals—showing by what means the stubborn glebe of these hills has been subdued, as the beautiful slope of three or four thousand acres on the south of this village bears witness. Some of these oxen were called into requisition at a drawing-match. A stone-boat loaded with five thousand pounds of pig-iron was the weight to be drawn and the friction of the boat over and above that of wheels probably added another thousand pounds. There was considerable animation in this trial of ox strength and brute force among the more immediately interested. I was satisfied with seeing one yoke march off with it in a stately manner.

There was a plowing match of four competitors, two with horses and two with oxen. The horse teams came out almost precisely even, and one of the ox teams distanced the other by one furrow. The recent rain made it unfavorable plowing, and diminished the number of competitors. In passing, I remark for the benefit of the rest of mankind, that I think this a far more rational and profitable trial of skill and strength than a rowing match.

from Virgil's rogatta down to the latest at Hull, that renowned city of fishermen and voters.

I pass over the horses, cows, sheep, and swine, for as to number and quality there was nothing very remarkable, which was rather creditable to the farmers than otherwise, for having discretion enough as well as tender mercies, not to dragoon the poor animals through such a rain storm as this equinoctial has been.

"Among the poultry were six real wild geese, noble birds, indignant at their ignoble confinement in a coop. If their owner had given them freedom and let them fly away, it would have been the best exhibition of all. There was also a lot of Nova Scotia ducks—beautiful birds. And these water fowl constituted the chief interest of the fowl exhibition, and most appropriate, considering the rain. Mr. Farnham of Lebanon, has in his poultry yard a queer hybrid which he took no pains to conjure up, and through contempt would not put into the show. The birds have no feathers, but only down. They are of all colors, grizzled, mottled, and no color. Some looked like a woodchuck and some like a Malta cat. Their size is good and their flesh and eggs not inferior.

In the show room were some things worthy of remark—good butter and cheese, of course; some very beautiful pieces of flannel of household production; raw silk hose, flesh colored, in clock work, very fine. Also a vase made by Mrs. Jacobs of Hanover, of a truly rural character. It was eighteen inches high and eight in diameter, stuccoed entire with acorns and the young buds of the hemlock when they are nearly the size of the acorn. The buds and acorns were beautifully arranged in Mosaic, and with its coronet of flowers looked very inviting. It struck me that herein was a line of art not much explored, but worthy of pursuit. The vegetable world has all variety for such work, both ornamental and instructive.

The exhibition of apples and plums were excellent, considering the scarcity in all this region the present year. Nothing has struck me with more surprise than the total neglect of farmers here—I may say in all the western part of New Hampshire—in cultivating good apples. It is only within the last fifteen years they have begun to think of the subject. They are going on now with commendable enterprise. Your nursery-men would find it greatly to their advantage in scattering advertisements and information through these counties.

The spacious tent might have contained ten times the quantity of articles it did. Among those exhibited were a superior machine for making window blinds by D. A. Cummings of North Enfield, and a set of machines for drilling and morticing in wood, by M. & J. H. Buck of Lebanon. Beautiful light buggy wagons were exhibited by Thompson & Jones of Lebanon—steel tires for the wheels, and a very ingenious contrivance to prevent the wheel, in turning, from meeting the body of the carriage. There was a good array of vegetables for the table.

At two o'clock, a discourse was listened to, (except what it was not listened to, for there was some noise), from the Rev. A. G. Comings, of Mason, Millsborough County—a *Christian* minister. Among other things, he showed the wisdom of adapting cultivation to climate, and surface, and other peculiarities. New Hampshire has its own,

and requires its own cultivation. The discourse was well received by those who could be interested in an agricultural subject.

There is danger from various causes that the County Fairs will lose their interest,—as from unpromising weather, the monopoly of the State Fair, and the superior attractions of the city exhibitions, e. g. Faneuil Hall and the Crystal Palace. A man can go from home to Boston or New York with less inconvenience than he can travel twenty miles from his farm to the Fair, by old modes of transit. It will be an evil if the County Fairs run down. Farmers should not disdain the humbler exhibitions of their own enterprise. They who make two spears of grass grow where one did before, stand at the foundation of metropolitan splendor. The press should encourage the Fairs, as do you and your

CORRESPONDENT.

—Traveller.

For the New England Farmer.

MEADOW LANDS.

The traveller, among the hills and valleys of New England's diversified scenery, can hardly fail to note the fact that a rich source of thrift is neglected, and a great avenue of wealth is cut off, by the total neglect or imperfect cultivation of the low, swamp lands, belonging to almost every farm. The arid sand plain has been cultivated because it was easy to work; till now, it is *very easy* to gather the harvest. The bleak hills have been made to yield to the plow, because our forefathers, finding them adapted to the growth of grain, placed them under cultivation; and it would be a sacrilegious act, in the eyes of many, to abandon the paths our fathers trod.

Nature—always a stern leveller—has for ages been removing the decayed vegetable matter, together with the disintegrated mineral fertilizers, from the hill-tops to the valleys, till they are now the rich receptacles of the properties essential to the growth of a large class of vegetable productions. But these swamps, instead of affording a realization of the poet's dream of fertile meadows, decked in living green, serve the unpoetic purpose of giving a home to loathsome reptiles and existence to myriads of annoying insects. In their unreclaimed state they disfigure the fair face of nature, give rise to pestilential vapor, and may with truth be called a *nuisance*.

The same labor which now produces a scanty crop upon exhausted field lands, would often meet a much better reward if judiciously laid out on meadows. The same energy which has made beautiful farms from the rough New England soil, can make the meadows blossom as the rose. But here, as in many other cases, it is not the power to plan, nor the energy to execute, that is wanting, so much as the conviction that the work can be done and the proof that it will pay for doing. That the useless bog can be converted into luxuriant grass land, has been practically proved. The place where *old brindle* formerly got mired every spring, has been drained and levelled, and now yields its two or three tons to the acre. Many a farmer who formerly was short of hay in the spring, and had to put his cows and oxen on short allowance, letting the young stock shift for themselves, now rejoices in a scaffold of hay for market each year, because he has marched in the van of improvement and developed more

fully the resources of his farm. That it will pay for doing is equally certain as that it can be done, yet not always so easily shown.

The expense of reclaiming or clearing bog meadows, must, like all other operations, depend upon circumstances. It may be difficult draining, or a growth of bushes may have to be removed before the work of levelling can be commenced; but whatever be the cost, there can be but little doubt of a good investment. Like the expense, the work of improvement varies in different localities. In one place a coating of gravel is necessary; yet there are meadows on which it would be injurious. Here the plow should be used, and there the work must be done with the hoe.

The mud in meadows differs as widely as the soil of high lands. In one place it is formed almost entirely from decomposed vegetable matter, and when exposed to the action of frost and air, quickly slacks or pulverizes. In other meadows, the mud is formed in part by the wash from surrounding hills—of the leaves, loam, and the light earth. Such meadows, when drained, have a tendency to harden, from which we infer that an excess of clay exists, and that a dressing of sand or gravel might be beneficial.

The operation of reclaiming or clearing should be pursued with caution. In no department of husbandry has a greater amount of useless labor been done, in proportion to the work accomplished, than in this business. Swamps, covered with a hemlock or cedar growth, have proved worthless with us; yet we have seen days of labor and dollars in money laid out, in the vain effort to raise a crop of grass. Believing experience to be the safest guide, we would advise experimenting upon a small piece at first, for time and money are of too much importance to the farmer to be squandered in fruitless effort. x.

Chester, N. H., Sept., 1853.

For the New England Farmer.

A REMEDY FOR THE POTATO ROT.

MR. EDITOR:—In conversation with a gentleman from Holliston this morning at the R. R. Depot, by the name of White, I learned that he has been in the habit for four years past of pulling the vines of his potatoes on the first appearance of their dying, which is an indication of their being diseased, and which he says is a sure preventive of any further rot if indeed they have rotted at all. He does it by stepping upon the hill each side of the vines, which prevents the potatoes being pulled up with the vines, which can be left in the ground any length of time. It is his opinion that the disease is caused by a sort of mildew which is carried through the vine to the potato. I do not recollect of having seen any account like this, therefore I thought I would send it to you, and if you think it will be of any service to the public you will please make it known.

Yours, &c., D. MERRILL, 2D.

Methuen, Sept. 21, 1853.

REMARKS.—In our opinion, the above comes nearer to being a remedy for this calamity,—for such it has been in Ireland,—than any thing yet recommended. If the disease is atmospheric, the vines first become tainted and conduct the virus

to the tuber below. Now, if upon the first appearance of the disease on the top, before much action can have taken place between the vine and the potato itself, the vines are immediately removed, the disease may be arrested and the potato saved. This is the theory, and it appears to us plausible and worthy of attention. It would require very close observation, to be sure, and when noticed, all the activity that could be brought to bear upon the crop in order to remove the vines at once. We should be obliged to Prof. HORT, of Exeter, if he would give us his experience and opinion on this important question.

For the New England Farmer.

MR. GEORGE PATTERSON'S FARM.

FRIEND BROWN:—I promised you some further particulars respecting the farm of Mr. Patterson. Here they are. In a recent visit to Mr. P.'s place I was not fortunate enough to find the proprietor at home, but was indebted to his miller, an intelligent man, who politely accompanied me over the grounds, and gave me such information as I desired.

The season has, for the most part, been favorable for Mr. Patterson's farm, though the drought did some injury in June. About 80 acres are in corn, which 'tis thought will yield twelve barrels (60 bushels,) to the acre; (when speaking of Indian corn, the southern farmer always uses the barrel, while he estimates wheat, potatoes and fruits by the bushel. Why the distinction I know not.) This was planted the last week in May and the first week in June, about one month after the usual time of planting in this region.

Mr. P. plows deep and cultivates clean. Very little use is made, however, of the hoe. Most of the labor is performed with the cultivator, or shovel plow. The corn is planted in squares, the rows being about four feet apart. The gourd-seed variety, planted here, grows much larger and occupies much more space, than the flint corn of the north. I doubt whether it is possible to make as many barrels of the former as of the latter, per acre. On the ground of which I am speaking, there is burthen enough to produce, in the Connecticut valley, ninety or one hundred bushels.

One peculiarity there is, to which I would call the attention of your readers. Farmers do not, as a general thing, *manure for corn*. If they have manure, they put it upon their wheat or grass, and plant corn without manure of any kind. The consequence is that they have fewer weeds and less corn.

I incline to the opinion, that the northern practice is best in this matter. If weeds must grow, and grow they certainly will when there is sufficient richness of soil, it seems to me better to have them with that crop which admits of cultivation, that as far as possible noxious plants may be subdued. Then, the grass weeds having been killed and the soil reduced to a mellow tilth, wheat, rye, oats and barley may follow, with better chance of success than if they preceded.

Mr. P. manures principally with lime. He has applied to most of his lands a dressing of two hundred bushels per acre. In New England, this

would be expensive manuring. On Mr. P.'s farm it probably costs not more than \$15 or \$20 per acre.

His opinion of guano, I understand to be, that it is too volatile; animal and vegetable manures from his stables and styes are carefully preserved and judiciously applied. A common practice in this State is, to continue the same crop so long as it will pay. A piece of ground is cleared and planted with tobacco, and yields a good crop. It is repeated and the cropping process is carried on as long as it will yield enough to pay the expenses of cultivation. So of other crops. I know of fields which have been in wheat the last two years, and are now being sown to wheat again. This is a very ruinous practice.

Mr. Patterson does no such thing. A proper rotation in crops he has made his study. His object seems to be, not to extort from his soil the greatest amount of products in a given time, but to secure and maintain such a healthy and vigorous condition of soil, as will return the greatest profits for the labor bestowed.

To effect this, he keeps his land much of the time in grass; when he takes up a plat of ground, his object is first to improve this condition of the land, and secondly, to secure a paying crop. In this way, his soil is kept in good heart and his crops are remunerative: or, if not, the loss is more than made up by the enhanced value of the land.

American farmers are greatly indebted to Mr. Patterson for the efforts he has made to introduce improved breeds of stock.

Nothing is more common among farmers than to cry out against "amateur farmers," and "book farmers," and say "'tis nought, 'tis nought"—to the results of scientific experiments. In this they err egregiously, and do great injustice to those who are laboring most assiduously, and sacrificing most liberally for the promotion of their best interests.

Without the aid of science, what would now be the condition of agriculture? and without "book farmers," whence would the light be obtained?

Mr. P. gives preference to the Devonshire breed of cattle, and breeds no other. I counted 26 cows of that breed, all of them as near perfect as a stock fancying artist would be likely to sketch in a fancy picture. Color, deep red, not a white hair, a mal-formed horn or any other blemish to be seen upon either. A two year old bull, of the same breed and color, was imported in June last, and cost \$700 in Baltimore. He imports a bull about once in two years, and raises his own heifers. His calves, such as are without blemish, he sells for \$100 each, when weaned. I was told they were bespoken months, and sometimes years beforehand. Besides this "blooded" stock, he has, what he denominates his "stock" cattle. Of these, I saw one hundred in one field. They were purchased last autumn, and are designed for the market, soon. They run out during the winter receiving hay from the barns, enough to keep them in a good condition, and then during the summer enjoy such a chance at grass that they become good beef.

In the raising of stock and making of beef the farmers of this region have great advantage over those of the north. The cost of wintering is but very little.

Sheep need but very little feeding during the winter, and so of stock, cattle and colts. I deem

it safe to assert that, the price and quality of land being the same, it costs not more than one half as much to raise stock here and in Virginia as in Vermont.

Mr. Patterson gives preference to the Berkshire pigs, and keeps no other. His hogs, as is the custom in this region, run in the fields during the summer and autumn. In his selection, he has reference to the hams rather than to the middlings, or sides. It is an interesting sight to see a "herd of many swine feeding," and especially to see and hear some two or three hundred black pigs "shuck-ing" among the leaves in a forest.

As to the products of the farm, I obtained the following items: four hundred tons of hay; one thousand bushels of corn; thirty-five hundred bushels of wheat; one hundred head of cattle fattened. This is, of course, but a portion of the products of the farm. A large number of hogs are fattened; much attention is paid also to horses and sheep.

Mr. P. has forty-one slaves, seventeen of whom are laboring men, and this constitutes his efficient force. He employs no overseer, but is himself daily and almost constantly with his men. He is represented as a very kind master, never overworking his men, and making very ample provision for their comfortable subsistence. Indeed, his neighbors complain that, by his indulgence, he spoils all the negroes in the neighborhood. Besides victualing and clothing them, he distributes money among them;—after harvest \$300, giving to each laboring man \$5, to the women and boys less. At Christmas about half as much.

I might write much more of this estate,—of the two copper mines recently opened, one by a New York Company, with a capital of \$500,000, the other by Marylanders, and which last is already paying Mr. Patterson more than the income of his whole farm had. After expressing the hope that many may be found in emulation of Mr. George Patterson, to expend money and apply the principles of science in agricultural experiments for the benefit of the great farming family, I will stop my furrow.

Yours, R. B. H.
Baltimore, Aug. 13, 1853.

THE SEASON.

It is remarkable that throughout the New England States there was no frost to injure even the tender vines until the morning of the last day of September. During that month an unusual amount of rain fell, so that the springs and streams are full.

The late planted CORN has come to perfection, and the crop generally will be a fine one.

The after crop of GRASS continues heavy and luxuriant, and will have a commanding influence on the price of hay.

POTATOES continue to come out badly rotted, but we think there will be no scarcity. Less of them will be fed to cattle and swine, and better care taken of those fit for the table.

APPLES will be high; they are selling readily now for three dollars a barrel.

CRANBERRIES are plenty and good, and bring rewarding prices—\$3 to \$5 a barrel.

CONSTERNATION.

This animal received the award at the New York State Fair last year, as the best thorough bred horse over four years old; and if we regard his delicate ear, keen eye, light intelligent face, well set neck, clean limbs, deep shoulder, round chest and long quarters, we must regard him as worthy of high admiration, and of the award given.

Horses have never commanded such high prices as at the present time, that is, horses of the first class. Common roadsters, or draft horses, bring high prices, but not high compared with what "fancy" or "fast horses" bring. The cities drain the country of the best animals, and those that are left behind are poor enough. We hope the enterprise at Springfield will call more particular attention to the breeding and discipline of horses, and result in important improvements.

IMPROVEMENT IN GRIST MILLS.—The *Worcester Spy* speaks of improvement in the manner of pecking mill-stones by which their capacity for grinding can be doubled. The editor of the *Spy* saw it applied to a mill in Worcester, and the result of its application was that a bushel of Northern corn was ground in a minute and a half—and that an old-fashioned mill, with a single run of stones, with the improvement, will grind *forty six bushels an hour*.

HOW SHALL WE PRESERVE EGGS?

This is the "*grand question*." We have in the course of our life tried nearly all the expedients that have been recommended, and sometimes succeeded, and sometimes failed; from which results you will say it is no more than fair to conclude that none of the methods are infallible. We have learned one fact from these experiments. Eggs should be perfectly fresh when you begin to preserve them. If an egg has commenced, even but a very slight decomposition, it is difficult arresting it; indeed, we are inclined to think nothing short of freezing will do it. The following very simple plan we have never tried, and know nothing practically whether it be effectual or not. We found it in the *Farm Journal* quoted from the *English Agricultural Gazette*. We pass it over to our readers for their consideration.

Take a half inch board of any convenient length and breadth, and pierce it as full of holes (each 1 1-2 inches in diameter) as you can. I find that a board two feet and six inches in length, and one foot wide, has five dozen in it, say twelve rows, of five each.

Then take four strips two inches broad and nail them together edgewise into a rectangular frame of the same size as your other board. Nail this board upon the frame and the work is done, unless you choose to nail a heading around the top.

Put your eggs on this board as they come from the poultry house, the small end down, and they will keep good for six months, if you take the following precaution: Take care that the eggs do

not get wet, either in the nest or afterwards. (In summer, hens are fond of laying among the weeds and grass, and any eggs taken from such nests in wet weather, should be put away for immediate use.) Keep them in a cool room in summer, and out of the reach of frost in winter. If two boards be kept, one can be filling while the other is emptying.

The writer accounts for the preservation of eggs in this way by supposing that the yolk floats more equally in the white, and has less tendency to sink down against the shell, than when the egg is laid on one side—certainly, if the yolk touches the shell it spoils immediately.—*Maine Farmer.*

MIDDLESEX COUNTY CATTLE SHOW.

The 59th Anniversary of the Middlesex Cattle Show came off at Concord on the 4th and 5th instants. The weather was fine and circumstances were propitious. The beautiful enclosure, the new and convenient hall just completed, the well-arranged pens for cattle and swine, and the new avenue leading to the ground, all contributed to the pleasantness and life of the scene. The show of vegetables, and especially of fruits, was highly creditable to the county. But we do not propose to speak of the exhibition within the hall, attractive as the subject is to our pen, but shall confine our remarks to such things as we noticed out of doors; and here the arrangements were all very good. There was a place for everything and everything in its place.

Perfect order was preserved throughout the two days. The system of admitting none to the grounds without tickets, was adopted for the first time in this county, and was carried into operation without difficulty. We noticed one or two things which we think time and experience will correct. We hope we shall not see again a seller of confectionary, or a shanty for the sale of new cider and fixings, or a noisy auction pedler attracting a crowd around his cart within the enclosure. There is room enough in the immediate vicinity, and they obstruct the view and disturb the quiet which is so desirable. We should like also to see a notice of the hours and places of the several exercises posted conspicuously about the hall and ground.

As we took our circuit around the enclosure, we were gratified to notice several fine colts and breeding mares. We noticed last week, at the Essex County Fair, several promising colts; and we are happy to believe that more attention is being paid of late, in the eastern part of the State, to the rearing of this noble animal, than for some years past. We noticed marks of the Black Hawk blood in most of the specimens present. We think, from present indications, that Massachusetts in two or three years more will make no contemptible display of horses.

The next range of pens that occupied our attention was that which enclosed the swine, and a

fine lot of porkers they were as one would wish to see. Mr. H. Sheldon had 20, old and young, on the ground. Two of them were said to be, not stone blind, but fat blind, the deposit of fat over their eyes rendering it impossible for them to open their peepers. As we saw the pigs of Horace Sheldon all snugly riding in a wagon, we clapped our hands and cried out, "Well done! that surely is something to brag of."

The swine of John B. Moore, we judge from their aspect and contented appearance, have not, like *Oliver Twist*, been accustomed to stand at their troughs and cry, more, more.

In the pen of Mr. Legget, of Billerica, we noticed a singular inconsistency between the properties of the animals and the name of their owner. Had it been an object with him to breed animals for the race, he would have selected a breed with longer legs. We are sure that the long-nosed, old-fashioned grunTERS could leg it much faster than his short-legged waddlers.

To say the pigs of S. G. Wheeler
Were grown familiar with the dealer
In corn, fancy, and other breadstuff,
Will not be reckoned as a great puff.

In another pen a cross was shown by Mr. Crosby, a crop obtained by crossing Suffolk blood with Middlesex or Mackay; and, although there may be some little doubt about the legitimacy of the cross, their marks prove that the cross of Mr. Crosby is a cross by which good pork may be made and a good deal of it.

There were 5 beautiful pigs, by James P. Brown, and one by the Editor of the *N. E. Farmer*, which showed that they not only have an eye to the main chance, but that they intend also to deserve well of their country.

The pigs of Mr. Farwell suggest the old proverb, that one might go farther and not fare better.

The cross-bred boar of Mr. Hadley,
If not the best, did not look badly.

Had the boar of Mr. Wellington, by any accident, fallen into a try-kettle, the fat we think would have welled up like water from a fountain. We wonder if any one has ever tried out a whole hog of the Suffolk breed, carefully noting the weight of the pork and that of the lard obtained from it, that it might be compared with the results from other kinds of pork. We think that when lard retails at a shilling a pound and pork is eight or nine cents, that this process, in the hands of some enterprising Yankee, would go on as smooth as oil, and that he would slip money in his purse as sleek as grease.

Taken as a whole, we have not seen so fine a show of porkers this fall, and we doubt whether there has been a better one in New England. By the great difference which is seen between pigs of the same family, we are reminded of the constant tendency to run back into the original stock from which they are derived. From what we saw on

the present occasion, as well as at almost every other show of Suffolk pigs which we have seen, we should be disposed, in many instances, to put a mark of interrogation after the term "pure bred," which is so often prefixed to them.

We think the show of stock was very fine for this section of the State. Certainly the number of fine animals, and especially of imported breeds, was greater than we have been accustomed to see in this county. We look upon the improvement of stock, whether by breeding from the best native stock, or from imported stock, as one of the surest indications of advancement in agricultural prosperity. We shall notice some of the animals or groups of animals that arrested our attention, without pretending to give any opinion upon their comparative merits. In pen No. 1, was an Ayrshire bull, from Mr. Conant. In 2 and 3, Devons, by Gen. Chandler, one of which we thought very fine. The next 4 pens contained 15 cows, calves and bulls, by G. M. Barrett. Most of them pure or mixed Ayrshire.

J. B. Moore had a very valuable cow and calf, and a noble pair of oxen. Mr. Moore, including his cattle, swine, fruits, vegetables and team at the plowing-match, was one of the largest contributors on the occasion, and considering that he was also Chairman of the Committee of Arrangements, he might say of the exhibition as *Aeneas* said of the Trojan war, "*Magna pars fui.*" Next in order was Gardner Heyward's Devon cow and calf. Nathan Pratt had a cow and calf, and a fine pair of steers 2½ years old.

H. Sheldon had a native bull 3 years old. Gorham Brooks exhibited a Durham bull, and a Durham and Ayrshire heifer, both remarkable for their size and beef-making qualities.

S. G. Wheeler had 11 cows on the ground, containing a good share of Durham blood, and one Durham cow and calf, both beautiful animals. Mr. Wheeler has done much to improve the stock in town, and we learn that he has purchased of Mr. Lawson, a pure bred Alderney bull calf, for which we think he is entitled to the thanks of the town.

A. S. Lewis, Framingham, had 6 cows from the stock of Mr. Webster, and one Alderney bull, imported by Mr. Webster, 4 years old, and one a year and a half old from the State stock, imported by Mr. Motley.

There is much difference in the different families of Alderney stock, at least in their appearance, and we presume in their characters and qualities. We were much impressed with this fact, on seeing there two bulls together in the same pen.

James Brown, of the firm of Little & Brown, Boston, had 5 or 6 Alderney and Devon, and one pure Devon, all fine animals. We understood they were on the ground too late to be exhibited for a premium.

There was an Alderney cow by E. M. Reed, Tewksbury, which calved 6 months ago, and in the hall were thirteen pounds of butter made from her last week. We learn from Mrs. Reed herself that she has made 17 lbs. a week, for many weeks, the past summer. Four quarts of her milk yield a pound of butter. The same thing is true of Mr. Lawson's Alderney cow in the next pen. These two cows were selected abroad and imported by Peter Lawson, Esq., and as dairy cows, or family cows for those who keep only one or two cows, we think this stock vastly superior to any other cows in the county. Mr. Lawson, also had a yearling bull of the same stock, which although his hair is white, he assures us is a pure bred animal. This was sold on the ground to Mr. Henry Shattuck, of Concord. He had in the same pen a beautiful calf, a few weeks old, the same that he has sold to S. G. Wheeler. We trust that the Concord stock will in due time show the good effects of this crop.

Mr. Furbush, of Bolton, had an Alderney heifer. James Brown, of Watertown, a half Alderney. Joseph Derby had a Devon bull, and a native, and a fine pair of native steers.

A. B. Lane had a good pair of oxen.

John Lawrence had a pair of steers that did credit to their keeper.

Mr. Viles, of Waltham, had a fine lot of milch cows.

Horace Heard, of Wayland, had an Ayrshire heifer, and Edwin Wheeler a half Ayrshire do.

Joel Wheeler had a full-blooded Ayrshire bull, as had Leonard Hoar, of Lincoln, and John Reynolds a half Ayrshire cow that made a good appearance.

And here we would say a word by way of caution to the owners of imported bulls or their immediate progeny. They cost large sums, and their owners are desirous to be remunerated as soon as possible. They are eager to increase their stock from them, and so are their neighbors, and by the time they arrive at the age of three years, they are prematurely old, used up, and fail in the service that is required of them. They should be used very sparingly until they have reached their growth and strength. This will be the best economy in the end, and ensure the best stock.

At 9 o'clock the Plowing Match took place, in a field near Augustus Tuttle's, on Cross Street, between the main road to Boston and the old Cambridge Turnpike. It was attended by a large concourse of people, and as usual, was witnessed with much interest by all. There were 43 entries for competition, but owing to a variety of causes 27 teams only plowed, which were classed as follows: 10 teams of a single pair of oxen each; 4 teams with two pairs of oxen each; 2 teams with a pair of oxen and pair of horses each; 3 teams of a pair

of oxen and one horse each; 1 four horse team, and 7 two horse teams.

The match embraced many fine cattle and horses, and was warmly contested. We believe Middlesex county has the honor of getting up the most extensive plowing matches of any society in the eastern part of the State, if not in the whole State. At any rate, her farmers go into the matter with a will, and it hardly need be said that they do their work well. The teams on this occasion were skillfully managed, and the whole thing was carried through without "noise or confusion."

Next came the Spading Match, a new and very interesting feature in agricultural exhibitions. This took place in the Society's enclosure, and excited much attention. There were twelve stalwart competitors for the palm of victory, who handled their spades with much energy and skill. But two of them were Yankees, the rest being Irishmen. The lots to be dug up were 5 feet by 12, and the match lasted about half an hour, the contestants being cheered in their labors by the inspiring strains of the Sudbury Brass band, who were stationed on the ground. The quickest spading was done in nine minutes and a half, but speed was not the only test of merit.

Directly after the Spading Match, a trial of Working Oxen took place on the Society's grounds.

There were 16 teams entered, and the task was the drawing of a load of rising 5000 lbs., up a hill and backing it. Some excellent muscle on the part of the cattle was exhibited, as well as good training, and their drivers displayed good skill in their management.

At 12 o'clock a procession was formed at the exhibition hall, under the direction of G. A. Somerby, of Waltham, and accompanied by the Sudbury Brass Band, proceeded to the Unitarian Church, to listen to an address from Hon. Lorenzo Sabine, of Framingham. The exercises were opened by a voluntary by the band, after which prayer was offered by Rev. Mr. Ellis, of Charlestown. The hymn commencing

"God of the year! with songs of praise,"

was then sung, after which the President of the society, Judge Hoar, of Concord, introduced the orator of the day. Mr. Sabine then proceeded to address the audience.

Although the address was not peculiarly appropriate to an Agricultural Festival, it contained many good thoughts and manifested much careful observation of men and things, and a thorough knowledge of human nature. It was addressed to fathers and mothers, and its leading thought was the importance of studying the talents, the tastes and the inclinations of their children, and directing them into those pursuits for life which are congenial to the natural bent of their minds, and to their physical organizations. It was written in

a very neat and chaste style. A large audience, including many ladies, was present, and the address was listened to with close attention.

The visit to the church was enlivened by good music under the direction of Mr. JAMES H. BILLINGS, who is entitled to the thanks of the lovers of music for his efforts to meet the occasion.

The exercises were concluded by singing the favorite "Harvest Hymn."

The procession was again formed and proceeded to the Town Hall, where an excellent dinner, prepared by J. B. Smith, of Boston, was spread for about four hundred persons. Here a new and pleasing feature in the arrangements of the society presented itself,—the presence of many ladies—this being the first time they have honored the annual dinner of the society with their presence. Romance aside, the attendance of the wives and daughters of the farmers on such an occasion adds greatly to the cheerfulness and gaiety of the hour spent over the social board. It is a most pleasing custom, and should be adopted by all agricultural societies who wish to flourish and keep up with the times.

After the company had got seated at the tables, the Divine Blessing was invoked by Rev. Mr. Ellis, of Charlestown. Mr. Hoar then invited attention to the feast, which was promptly attended to.

After the keen appetites of the company had been fully sated, Mr. Hoar rose, and in a happy and appropriate speech congratulated the members of the society on the success which had attended the exhibition, and also upon the increased facilities secured for the purposes of the society. He also congratulated them on the appearance of a *new set of features* (the ladies) at the dinner of the society. He appealed eloquently to the members of the society to take a pride in rendering the cultivation of the county second to that of no other, and an honor to the State.

Mr. Hoar, then, in a spirit of happy banter, called upon various gentlemen for speeches. The first was the orator of the day, Mr. Sabine, who responded with a sentiment.

The next was Hon. Mr. Wright, Secretary of the Commonwealth, in response to a toast in honor of Massachusetts. He reviewed the high position which Massachusetts holds among her sister States, and compared the exhibition of the day, with its representatives from every branch of society, to a miniature State—a miniature empire. He referred the cause of the eminence of Massachusetts to the *thinking* labor of her sons.

Mr. Loud, the Treasurer of the State, was next called up, and responded in a pleasing strain of remark.

Mr. Dix, of Littleton, one of the original founders of the society, and upwards of 80 years of age, followed with a few pertinent remarks and a sentiment.

The next speaker was Rev. Mr. Ellis, the chaplain of the day, who made a graceful, off-hand speech, which was heartily received.

Mr. E. J. Cutler, of West Holliston, was next called up, and responded in a fine descriptive poem, giving a beautiful picture of the influence of the seasons on the vocation of the farmer.

Hon. J. Wiley Edmands of Newton, Hon. Tappan Wentworth of Lowell, Hon. B. V. French of Braintree, J. W. Proctor of Danvers, and Hon. Charles Hudson, of the *Boston Atlas*, also made pertinent and effective speeches.

The premiums were announced at the dinner table, by the chairmen of the several committees, and the company broke up at a late hour, well satisfied with the day and the exhibition.

The *New Building* was well filled with fruits, vegetables, ladies' work and miscellaneous articles.

Rowell & Co., West Acton, exhibited self-sharpening hay-cutters. A single stationary knife is used, against which the hay is pressed by revolving flanges.

Parker & White had plows of fine finish,—chain-pumps, corn-shellers, butter-moulds, apple-paring machines, folding-ladders, barn-vanes, &c.

A. W. Putnam, Lexington, had a set of modern horse-rackets in contrast with the clumsy things first used.

L. B. Brown, Stow, brought a plow which might have been his grandfather's. Comparing it with the graceful neighbor with bright mould-board and keen cutters, the improvement indicated in plow-making within forty years was wonderful.

E. H. Warren, Chelmsford, showed monstrous beets.

Geo. E. White, Melrose, had some of the famous Mexican wild potatoes; also, Stowell sweet corn.

A basket of Holland potatoes from A. Longley, Groton, were very large.

Wm. W. Wheildon had some good-looking crooked-neck squashes.

Thomas Spleine, gardener to S. G. Wheeler, Concord, made a fine show of vegetables; good evidence that his operations are conducted with skill.

The pumpkin crop was well represented by several contributors.

Samuel Barrett, Concord, had a large Carolina watermelon.

A basket made wholly of ears of corn and piled high with onions, ("perfumery") attracted much attention. By A. W. Putnam, Lexington.

Nathan Barrett showed a basket of very healthy potatoes, "four years from seed" (balls!) He says "they never have rotted." Good.

Wm. D. Brown, Concord, had a basket of very large Gilliflower potatoes; planted early in deep plowed land, manure plowed in.

Rev. Geo. F. Simmons, Concord, exhibited some very nice Ladies' fingers; except, perhaps, that they were a trifle too large for their name; being about the size of a lady's arm!

Charles Bartlett, Concord, some good potatoes raised from seed brought from California.

Three large watermelons, weighing 80 lbs., grown from one seed, were from the good farm of Chas. Howe, Marlboro'.

Mrs. Mullet, Concord, had large marrow squashes.

John B. Moore's display of vegetables was very fine. His beets and Lima beans caused frequent exclamations.

E. W. Bull, Concord, showed excellent vegetables and watermelons.

James Wood, Concord, had a squash there, apparently a direct descendant of the monster of last year. No occasion less than a farmer's thanksgiving would require such an amount of "material."

J. Hosmer, Jr., had a few pumpkins with very long bodies and thick-meated. Called the Nova Scotia. Josiah Stickney of Brighton, covered a rod or more of table with excellent fruit. Plump, round Winter Nelis pears; handsome Van Mons. Leon Le Clerc; Louise bon de Jersey, with a blush like a maiden's cheek; large, hard Vicar of Winkfield, Duchesse, &c.

Micah Leland, Framingham, showed some fine winter sweet apples.

Asa Clement, Dracut, had pears in great variety; the Catillac, very novel in shape. Also the Minister apple, mottled with red; Osgood's late yellow, and Crawford's late peaches. Isabella and Catawba grapes.

Peter Lawson, Dracut, had several plates of pears; Beurre Diel, very large and tempting; Duchesse de Angouleme. Also the Ribston Pippin.

Rev. Chas. Babbidge, Pepperell, had the finest Isabella grapes upon the tables. The berries were of uncommon size, and the bunches of liberal length.

John M. Cheney, Concord, showed Duchesse de Angouleme and St. Michael pears.

H. A. Wheeler, Concord, had very fair Hunt Russets; Albert Hagar, Lincoln, late Crawford peach; Albert Stacy, Concord, fine Seedling peach.

Morey & Co. had a plate of the famous Diana grapes. They seem to be a cross between the Sweet-water and Hamburgh. We understood that they are ripened with difficulty in the open air. The same gentleman had a fine collection of pears; Swan's Orange and White Doyenne, &c.

In the department allotted to the ladies, there was a very attractive exhibition of the useful and ornamental.

We noticed an ingenious "Tidy," by Miss A. M. Stacy, Concord; Sofa Pillow, by Mrs. L. Wetherbee, Concord; a large and striking picture, made with the needle,—An English Hawking Scene, embroidered by Rebecca T. Ames, Charlestown;

child's wrought dress, by Mrs. Julius M. Smith, Concord; wax flowers, by Sarah E. Wheeler; a handsome picture frame, the ornamental part of leather, and a portfolio of papier mache, by Helen F. Damon, Concord.

Several pairs of stockings, by Mrs. Sarah Adams, 92 years old, and Mrs. Sarah Loring, 84 years old, of Concord, were very creditable.

The nicest, warmest men's socks we saw were by Mrs. Joseph Derby, Concord.

The young lady's patchwork, containing a certain number of *peases*, according to the label, was better than the spelling!

Two engravings—the famous Chatsworth "Night and Morning"—were exhibited, with frames made of the cones of the Norway pine, by S. C. Brown, Concord. A handsome hearth-rug, by Mrs. James Wood, Concord. Very fine specimens of Crayon drawings by Mrs. L. Wetherbee. A piece of framed worsted work by R. Ray, Boston.

Some of the finest grapes and pears were next to the ladies' articles. They were from L. Nesmith's garden, Lowell. Single clusters of Ham-burgh grapes filled a dinner plate. The white "Muscat of Alexandria" grapes were very tempting.

Rev. B. Frost, Concord, had *Passe Colmar* pears, *Heath* peaches, quinces and grapes. Also, a single; noble specimen of the *Pound pear*—one of the real Dr. Ripley pattern. Mr. Frost's garden—and few are now finer, was a few years ago, a very poor rye field. Ralph Waldo Emerson, Concord, had *Seckel* pears, *Iron*, and *Winter Nelis*.

Francis Smith, Lincoln, late *Crawford* peaches; *Seth Bemis*, Watertown, several dishes of pears—5 large ones upon a single twig. D. Loring, Concord, showed handsome peaches and pears; M. Pritchard, Concord, basket fragrant grapes; E. W. Bull, Concord, had a very large space filled with the rare productions of his fine garden. We noticed a superior plate of the *Northern Spy* apple, soon, we hope, to be more common. They were large, deep green and red. Also a new seedling grape, something like a first-rate native, ambitious to possess the tenderness of the *Isabella*. Mr. B. had also, a plate of the *Diana*, but inferior to the new seedling.

Judge Hoar exhibited some mammoth quinces, also a very interesting basket of grapes, labelled "for the Society's Dinner." W. W. Wheildon, Concord, showed a fine plate of the *Maiden's Blush*, as last year. This tree seems to bear the rosy cheeks annually. Judge Mellen, of Wayland, had some fine *Beurre Diel* pears. C. W. Goodwin, Concord, *Dix* pears and *Porter* apples. Henry Vandine, Cambridgeport, showed rare and choice fruits. L. Bullard, Wayland, 15 *Seckel* pears on one stem. Nathen Barrett Concord, exhibited fine specimens of apples and pears; J. S. Wetherbee, Marlboro', *Harrison* apple, very showy;

Long Jersey Russet, a smooth handsome fruit, *Lyscom & Co.* J. B. Moore, Concord, had a large collection of fruits from his productive farm.

Micajah Rice, Concord, had a plate of *Ramshorn* apple, handsomer than their name—a good deal. *Ramshorn*! what a name for an elegant and well shaped apple!

Francis Monroe, Concord, showed 7 mammoth quinces, sticking tight to one little twig. Also, a fine seedling peach. Mr. Monroe has cultivated his garden for six years. It produces abundantly. One *Bartlett* pear tree bore this summer a barrel of excellent fruit! He has the good things of the earth in profusion, from a single, well-tilled acre!

Dr. Reynolds, Concord, exhibited 24 *Buffum* pears upon a limb three-fourths of an inch in diameter! Also, *Fulton* pear and *Glout Morceau*. C. O. Damon, Concord, a quince weighing 18 ounces.

E. J. Leppelman, Concord, had beautiful peaches—few would desire finer; *Green Catherine*, *Late Crawford* and *Melocoton*.

J. D. Brown, Concord, showed very fair *Baldwins*, *Hubbardstone*, *Pearmains* and *Russets*.

J. W. Brown, Concord, superior *Baldwins* and *Porters*; A. B. Lane, Bedford, fine *Porters*; E. Hale, Rockbottom, *Peck's Pleasant*—a kind of *Greening*, very fair, and uniform size.

The Brothers Edmunds, Chelmsford, had large *Hubbardstones*.

Simon Brown, Concord, exhibited fine peaches, quinces, and *Sweet potatoes* raised from slips started in a hot-bed.

The *Russets* from C. Bowers, Concord, were very handsome. Sampson Mason, Concord, had a full dish of *St. Michael* pears; Edwin Wheeler, Concord, fine *Isabella* grapes; Cyrus Wheeler, Catawba; Luther Adams, "Cofford late" peach! Jonathan Wheeler, Concord, had several dishes of nice apples. The *Baldwins* were about the plumpest we have seen.

E. H. Warren, Chelmsford, had "Louisa bon de Jersey" and *St. Michael* pears. Also, rich looking peaches. John Brown, Concord, *Baldwins* and *Greenings*; W. D. Brown, *Sweet Russet*, *Hubbardston* and *Delta* apples. Also, a box of honey. Maj. Benj. Wheeler, Framingham, exhibited a basket of fruit to be enjoyed at the "table." E. Bird, Framingham, had more of the *Ramshorn* apple. *Phoebus*! what a name!

But here is the butter,—13 boxes. Few in number but excellent in quality.

S. Spalding, Chelmsford, had a box of stamped cakes. A. Sheldon, Wilmington, a box of moulded butter. It had a sweet flavor. Mr. Sheldon's cows must "live in clover."

There were several boxes from the rich pastures of Marlboro'. Mr. F. Barnard, John F. Rice and Chas. Howe, had excellent butter upon the table.

We felt almost like trying it upon some of the neighboring loaves of bread.

We finished our hasty survey of the things in the Hall, in the bread corner. There was something peculiarly suggestive about the nice cut loaves. Laying down pencil and paper, we thought, will there be as many heavy, half-baked, sour batches of bread made in Middlesex County the next year as have been the past twelve months! Here were loaves something about what the "staff of life" should be. Many were from un-married women; and, perhaps rather an important exhibition for them; for to many a young man, just getting the nonsense out of his head, the fact that *she* can make *good bread*, is not a small consideration in making a matrimonial arrangement.

While upon our walk among the tables we heard opinions from gentlemen who had visited the State Fair in New York, and Shows in other parts of the country. They all agreed that the fruits and vegetables here surpassed all that they had seen.

¶ We would express our obligations to Dr. JOSEPH REYNOLDS, for valuable aid furnished in giving the general description of the Show, and to WM. D. BROWN, for the comprehensive statement and description of the fruits, &c., exhibited in the Hall. We were obliged to leave early on the morning of Thursday for Vermont, and thus the reader gets a more poetic, if not graphic, account, than our own pen would have afforded.

For the New England Farmer.

SWALLOWS—GRASSHOPPERS—THE CROPS.

MR. BROWN:—Some weeks since in the *Farmer*, you requested information in regard to the swallows' coming and going.

The common barn swallows made their first appearance April 8th, but were not seen in numbers till the last days of April. The chimney swallows did not come till the middle of May. The barn swallows nearly all left us the 3d and 4th of Aug., though I saw a few after—a few the 30th. On the evening of the 16th, the chimney swallows assembled in numbers for a merry time,—a sort of jubilee preparatory to leaving us for more sunny climes, burying themselves in the mud or disposing of themselves in some other way for the winter; the air was alive with them, and very plainly they were having some excellent fun, for they kept up the sport till the evening was well nigh gone. The next day they were gone, and not even a straggler have I seen since. Notwithstanding the authority of Mr. White and others, I am slow to believe that they bury themselves in the mud thus early in the season, to remain dormant till the next May. Rather a sorry time of it the poor fellows have, if that be true—three months of the very busiest, jolliest life, and nine months of torpidity.

The grasshoppers have been innumerable hereabouts, eating up every green thing. Many fields of oats they entirely ruined, and the wheat and rye were considerably injured.

One man, in a small wheat-field of perhaps five acres, picked up eight bushel-baskets full of heads gnawed off by them, and probably left as many more on the field. In the *corn-fields* they attacked first the leaves and tassels and then the ear, gnawing husks, kernel, cob and all. Nor did they neglect the apple-trees. I saw some heavily loaded with fruit, from which they have taken almost every leaf, and in some few cases the bark of the tender twigs. There will be comparatively few apples this year, but has been, or will be, an abundance of almost every other kind of fruit grown here.

Our *potato* crop will be fair, though very much injured by the drought. As yet I have seen no signs of rot, and the rust came so late as not to trouble them much. The drought has been excessive, no soaking rain since May, and the inside of the potato-hills is and has been very dry. Now, our springs are well-nigh dried up, lower than they have been for many years before. The hay-crop was light, though somewhat better than last year, where it was cut in July, before the grasshoppers began to work in earnest. The quality could not be better.

Of *corn*, the yield is more than usually good, and even the pumpkins, that the farmers thought entirely destroyed by the bugs, are pretty fair, with a superabundance of vines. Fall feed is very poor, owing both to the drought and the grasshoppers; hence the amount of butter made must be very small. Indeed, the pastures have been so poor that the cows have given but little milk through the season, and now are nearly dry. W. C. B.

Gaysville, Windsor Co., Vt., Sept. 20th.

REMARKS. — "W. C. B." will accept thanks for the above, and we hope, favor us often with short communications.

THE WHITE CLOVER.

BY A LADY OF NEW HAMPSHIRE.

There is a little perfum'd flower,
It well might grace the loveliest bower,
Yet poet never deign'd to sing
Of such a humble, rustic thing.
Nor is it strange, for it can show
Scarcely one tint of Iris' bow;
Nature, perchance, in careless hour,
With pencil dry, might paint the flower;
Yet instant blush'd, her fault to see,
So gave a double fragrancy;
Rich recompense for aught denied!
Who would not homely garb abide,
If gentlest soul were breathing there,
Blessings through all its little sphere!
Sweet flower! the lesson thou hast taught,
Shall check each proud, ambitious thought,
Teach me internal worth to prize,
Tho' found in lowliest, rudest guise.

FRANKLIN COUNTY SHOW.—The reader will find an interesting account of the Cattle Show at Greenfield, on another page of this paper. We had the pleasure of seeing how earnestly our friends are engaged in the good cause in that part of the State, and of enjoying their hospitalities. The Show was a fine one. The address, by Dr. LEE, was excellent, and was listened to with great interest. Being in the vicinity of the Hoosac moun-

tain, we improved the opportunity to visit the spot where the contemplated tunnel is to be commenced, and in so doing saw many things agricultural, which we may speak of hereafter.

For the New England Farmer.

FALL PLOWING.

MAKING AND APPLICATION OF MANURE—PULVERIZATION OF THE SOIL.

BY F. HOLBROOK.

MR. BROWN:—From the last of October to the middle or later of November is a good time for plowing land preparatory to sowing or planting it the following spring. The autumnal weather is cool and bracing, and the oxen and horses are strong and hearty for the work; while the temperature of the spring season is more relaxing, and the animals of draught are then apt to become laggard and faint,—particularly at the business of overturning green-sward. To be seasonable, spring work must at best be despatched in a great hurry, and it is a relief and advantage to have the plowing done in the fall. If land in corn-stubble is first well harrowed, so as to pull open, and level down the hills and scatter the stubs about, then plowed in the fall, the stubble, lying beneath the furrows through the winter, will not be apt to come to the surface by harrowing in the spring; the grain and grass seeds can be committed to the already prepared ground, at the earliest suitable day in the spring, the surface of the newly-stocked land will be smooth, the seeds equally distributed in harrowing, the crop of grain will be early and thereby luxuriant, and the young grass, having the benefit of the early rains, will get good root, be more likely to survive the heat and drought of summer, yielding a full bite of aftermath in the fall, and good succeeding crops of hay. Sod-land plowed in November, will be free from growing grass in the spring, the roots of the late overturned sward being too far deadened by the immediately succeeding winter to spring very readily to the surface. The plowed land, after being subjected to the frosts of winter, will readily disintegrate and crumble down in fine particles when harrowed in spring,—yielding a mellow seed-bed and facilitating the business of planting and the first hoeing, and the manure applied can be readily and nicely mingled with the kindly soil. Corn planted on sod furrows turned the fall previous, will not be so liable to injury from the copper-heads or cut worms which eat off the young stalk at the surface of the ground, as though the land had been plowed in spring. So great heretofore have been the depredations of these worms on my young corn, when planted on the sandy intervalles which were broken up from grass in the spring, that now the meadow-land which is to be made ready for a corn crop, is invariably plowed late in the fall. By means of this precaution the ravages of the worms have been pretty much prevented, but few hills of corn being entirely destroyed,—indeed, in passing through seven acres of corn to-day, vacant hills were not discovered, though looked for, and I think there cannot be enough loss of crop from this cause to be of much account.

I have a piece of old sod, of seven or eight acres, which I intend to plant to various hoed crops next spring, and which I shall plow about ten inches

deep this coming November. Fifteen years ago, the soil of this field was not more than four or five inches deep; and now, friend Brown, I can plow ten inches deep and show you better soil, at that, than you could have found in the field at the former period; and the crops are larger than formerly, as well as much surer of becoming sound and ripe—being less injuriously affected by unpropitious peculiarities of the season. These results have been realized by means of a systematic rotation of crops, along with a gradual increase in the depth of plowing at each rotation, and the application of stout dressings of compost manure. They could not, in my opinion, have been attained without the deep plowing, nor without the making of manure by composting; for enough of the elements of fertility, and particularly of vegetable substance, could not have been supplied to the land to make the deep and healthy soil, if nothing more than simply the excrements of the animals, and the refuse of the crops had been returned to it, and if the plowing had been no deeper than the original soil. The soil is now unctuous, fine-grained, productive, standing a drought well, where before it was coarse, porous, dry and poor.

Perhaps you would like to know where the manure is to come from, for these seven or eight acres. The manure made since last April, by two horses kept to hay and grain during the time, has been thrown into a covered hog-yard beside the horse-barn, where three or four shoats are kept. Regularly once a fortnight, two loads, or about a cord of either muck, vegetable mould from the woodlands, or thickly-matted turf, has been hauled home and placed in the pen—first spreading the manure equally about. The hogs have tumbled the materials over and over, and prevented the horse-manure from unduly heating; and the yard being covered, and of dimensions only about twelve feet wide by sixteen or eighteen long, the manure has been kept in a small compass, has not been subject to much loss by evaporation, and is now a solid pile, five or six feet deep. The compost will be removed to the field this fall, there covered with muck, and its quality, for corn particularly, can rarely be surpassed.

In October, 1852, the barn-yard was cleaned out, and the bottom of the yard covered with muck and loam, a foot deep. Pleasant days during last winter, corn and other coarse fodder was fed to the cattle in the yard; and the refuse fodder, with the cattle-droppings during those days, are now there, above the muck. The whole was well covered last spring with muck and sods, and the cows have since been kept in the yard nights. The contents of the yard will be taken out and piled a few rods from the barn, and the pile drawn to the field by selding in the winter.

My system of making compost in the cattle stalls, gives a somewhat unusually large quantity of manure, considering the number of cattle wintered. I have heretofore described the process pretty minutely in the *N. E. Farmer*, and have received several communications from brother farmers, stating that they had tried the same as recommended, and with satisfactory results. During the present month, the leaves and vegetable mould collected in little hollows in the woodlands, will be dug up with stout hoes made for the purpose, and piled in a convenient place near a sled-road through the woods, and drawn to the barn a few

loads at a time by sledding next winter. Each morning, during the coming "foddering season," a portion of the leaves and mould will be placed in the water-tight trench behind the cattle in the stable, at the rate of say a bushel to each grown animal. The cattle will have a bedding of straw or other coarse litter. The solid and liquid droppings of the animals will go into the trench, upon the leaves and mould, and the contents of the trench, together with such portion of the bedding as needs removal, will each morning be thrown out, becoming in the operation well intermingled. Some winters, according to convenience, muck which has been thrown out of the swamp a year or two previous, and become light, dry and fine, is used instead of the vegetable matter from the forest. The quantity of excellent compost that can be made in this way is greater than persons who know little of the system would imagine; and the expense of making it is quite unworthy of account, considering the results realized. The manure made in this way during next winter, will in March and April be drawn to the plowed field and piled in a compact heap to undergo a partial decomposition, previous to being spread upon the land.

Some sixty loads, or thirty cords of swamp muck, were in August last mixed with six tierces (two barrels to a tierce,) of fresh lime. The lime was slaked to a dry powder as fast as wanted, by putting on just enough water for the purpose and then applied hot to the muck. The heap will soon be overhauled. It will be taken to the plowed field by sledding the coming winter, part of it used as bottom layers for the heaps of manure to be drawn there from the barn and yards, part for covering these heaps, and the remainder will be mixed with fifteen or twenty loads of horse manure, purchased for the purpose.

From these several sources, enough manure will be had to put the land in good heart for bearing the next rotation of crops with which it is to be burdened. In my experience, friend Brown, I have never known mother earth refuse or fail to reward one for good cultivation. If you are generous with her, she will contrive, in one way or another, to modify for you the effects of those untoward peculiarities of seasons, &c., which, in your plans, you could not anticipate nor control, making up for you, in some of her products, what, through imperfect and limited foresight, you have been disappointed in receiving by others, so that your husbandry shall in the aggregate result favorably. But as for the grumbling sluggard, she expects no favors from him, and has in return but few to bestow, being quite as independent as he.

I make no objection to handling the compost these several times, because the various ingredients become thereby the better pulverized and mingled, and the mass enough improved to more than pay the expense. It is the finely pulverized particles, rather than the great hard lumps, whether of soil or manure, that nourish the roots of vegetation and secure large and sound crops.

Twenty years ago or more, I read with much interest the writings of Jethro Tull, on pulverizing and preparing land for crops. I could not but admire the enthusiasm of the old fellow; and, although I found it necessary to make some grains of allowance for his honest ardor, I yet got some ideas of the value and primary importance of thor-

ough pulverization of the land, which have stuck fast to me ever since, and from the practice of which much benefit has been derived. I am every year led to wonder at the foolish steps taken by some farmers in preparing land and manure for a crop. Under mistaken notions of economy, they seem to regard nice pulverization as quite too notional and particular for them—an expenditure of labor which the *practical* farmer cannot afford; while, in truth, such careful and thorough preparatory labor is just that additional labor and outlay, coming at just the nick of time, which constitutes the true economy of the whole concern,—making the germination and vigorous early growth of the crop certain, saving labor in after-cultivation, and bringing the fertility of the land and manure into full activity; thus protecting the growing crop in the best attainable way from the unfavorable influences presented by the season or otherwise, so that it attains a sound and ripe maturity and yields a full harvest. I have known cases where the same manure and land would have produced enough more crop than was actually obtained, had the pulverization been more nice and particular, to pay the owners (I speak advisedly,) ten dollars a day for the necessary extra labor. I would recommend in such instances the considerate reading of the writings of Jethro Tull. They are old, but quite instructive, teaching principles of fundamental importance in the business of farming.

With regard to the application of manure to green-sward, I would remark that we hear two extremes advocated: some say its fertilizing properties all have a tendency to rise and pass off in the atmosphere, and therefore it should be plowed in deep; others say its goodness tends downwards, or at least that it remains inactive if plowed in, and therefore it should be only harrowed in. So far as I know, both parties are in part right and in part wrong; for neither is manure the most beneficial to the crops when it is plowed in deep—particularly if covered by sod furrow-slices—nor when left too near the surface; but if placed, not so low as to exclude it from the necessary atmospheric influences to promote due decomposition, nor so high as to become dried and dissipated by wind and sun, but low enough for the mellow soil to close all around it, and imbibe on all sides the gases and juices which it is inclined to part with by decomposition, its fertilizing properties will be brought into activity and made available to the land and crop, so far as in the nature of the thing they can be.

After experimenting variously in the application of manure, sometimes plowing it in so deep that it had not action enough to suit me, and sometimes leaving it too much exposed on the surface of the plowed land, I now generally plow a good depth to begin with, then spread the compost on the surface of the plowed land, harrow and crop-harrow to distribute and pulverize the manure, and then with a plow having a sharp share, and a roller on the beam guaging the instrument to the depth wanted, turn the manure under from three to five inches deep, where, all things considered, it seems to do the most good, and thereby making fine pulverization and a deep seed-bed. In the spring, this will be my way of treating the seven or eight acres of sod to be plowed this fall. Manure plowed in on stubble or old mellow ground,

is not so liable to be wanting in action, because it does not fall exclusively to the bottom of the furrow, but mixes more or less with the loose, crumbling, overturning furrow-slice, and finds a resting-place higher up in the soil.

I have to say that in advocating fall plowing, I am supposing that the land to be plowed is suitably free from undue wetness, and not so steep nor of so uneven surface as to be liable to wash considerably by late autumnal and early spring rains.

F. HOLBROOK.

Brattleboro', Oct. 7th, 1853.

For the New England Farmer.

EXHIBITION

OF THE FRANKLIN CO. AGRICULTURAL SOCIETY.

This youngest and fairest of the Massachusetts family of fourteen, came before the public, gallanted by her accomplished President, on the 6th and 7th days of the present month, in a manner to command universal admiration. We have witnessed many exhibitions of the kind within thirty years last past, but we can truly say, never have we seen one that more fully accorded with our notions of what is proper to be done. Not that here was the greatest and most brilliant display we have ever seen, but because the exhibition was appropriate to the occasion, and every thing was done decently and in order. We arrived on the ground at 12 o'clock of the first day, and were immediately conducted to the beautiful field, where the animals were to be exhibited. Here were between one and two hundred pairs of working oxen, ranging from 4850 to 3000 lbs. weight per pair, or from 8 feet to 6 feet girt, averaging, as we were told, 6 3-4 feet girt. We have never seen the like before. Among these, we saw some of the Durhams, some partly Durhams, and a few Devons; but more than three-fourths of the whole were natives, clearly confirming the impressions that we had formed, that the yeomanry of our hills, who generally understand what they want, are satisfied that the native cattle of New England can work well enough for them. Our attention was particularly called by one of the officers of the Show, to a magnificent pair of three years old steers, said to weigh more than 4000 lbs., and truly they were equal to the representation. We were induced to enquire into the particulars of their history; and just as we were pencilling in our Note Book "Beat this who can," we cast a single eye upon the yoke, and saw that our informant had mistaken a 5 for a 3, so that the charms of their age soon vanished; for it is certainly true, that an addition of a few years only, makes a wonderful difference. We have, for some time past, been sensibly impressed with this feeling. Even taking them to be five years old, as they were, we have seen none better.

Next, our attention was called to the milch cows, about 20 in number, and these appeared as well as could be expected; but we are not satisfied to form an opinion of this class of animals by external appearances, even with the aid of the famed escutcheon index, which, by the by, is no fool of a sign. We failed to learn all we wanted to know about these animals, but was kindly informed by the venerable Chairman of the Committee, that the milk of one of the best had yielded 16 lbs.

5 ounces of butter in a week the present season. When a cow will yield 2 lbs. of butter a day on fair feeding, we have no hesitation to pronounce her a good cow, even if she does not do this more than 200 days in a year. We have heard of cows that will do this 365 days in a year, but we have never seen such, and never expect to, although they are said to be at the present time at Lowell, where great stories are sometimes manufactured, as well as many other great things.

Among the heifers, we noticed several of the Jersey breed, lately imported by Judge GREENHILL, and are right glad that the enterprising farmers of Franklin County are to have an opportunity to test their character. Of the superior quality of their milk, we are fully satisfied from our own observations. That 7 quarts of it will make as much butter as 10 quarts from our native cows, we are well assured, and generally, that these quantities will be required of each class of cows, to make a pound of butter.

Quantum sufficit of bulls were presented, for all the purposes for which they are needed. We have long been satisfied that good bulls are essential to the raising of good stock, and that even more depends upon the male than the female, in raising stock for dairy purposes. We are also satisfied, that no animals are worthy of premium, that have not been reared with particular care as to their qualities—and cows especially, with particular care as to the quality of their milk. In a herd of half a dozen, we have known the milk of all to be essentially impaired by the poor quality of one.

A goodly number of sheep and swine were there; full justice to them was done by the distinguished chairman of the committee, who had them in charge. Under his magic power, they coalesced to a charm. The report on the swine was a clincher—but we must say, we were not a little astonished to hear an allusion to the "Great Bore" of the mountain, in the presence of those who were there. But our curiosity was so much awakened by the allusion, that coarse as we esteemed it, we could not leave the hills of Franklin and Berkshire, without seeing the animal, monstrous as he was said to be, and really, the nearer we came to the "monster," the less formidable did he appear. If we lived in that region, we would not cease continually to cry, until the State had done as much to help us through the mountain, as they have done to help others over it. So much we think is proper to be done, though we have little expectation of its being completed in our day. But we have long since had a suspicion that there is no obstacle that Yankee enterprise will not surmount. On the morning of the second day, we witnessed a truly splendid display of horses of every class, particularly breeding mares with foals at their feet. We were assured by the chairman of the committee, that never to his knowledge has there been so fine an exhibition of this animal, in Western Mass. We are glad to find so much attention given to the rearing of horses of good blood. It is just as easy to rear a colt worth \$100, at 3 years old, as one worth \$25, by proper care at the commencement. Without a good beginning nothing good can be brought about.

On the plowing field, were about a dozen competitors. We have never seen work any better done. We should have been pleased to have seen teams from every town in the county, and res-

pectfully say, that such teams ought to have been there. This operation is at the foundation of all culture; and although great improvements have been made in *plowing*, many more remain to be made. One feature of the work is worthy of all praise—the deliberation with which it was done. We want teams to work for the premium, as the good farmer would work them at home; we want no “noise and confusion” there.

Although we are decidedly in favor of *short speeches* at a dinner-table, we are not able to pen a *short account* of a Cattle Show. There are always so many things seen, that the half cannot be told. The best part of the exercises of this occasion is still to be mentioned, viz., the address at the church by Dr. DANIEL LEE, of Rochester, N. Y.—Saving an *extra half hour* in length, this was a *model performance*. No man has a right to take up more than *one hour* in a speech, on such an occasion. As much can be said in an hour as can be remembered, and what is the use of saying more? Dr. Lee is full of the matter—and with his *ears of corn, potato and apple* as mementos—capable of giving as instructive an address, as any other man. We have full notes of it, but we should prefer that he would give it to the public in his own words. Every man himself can best express what he intended to say, and no one without his consent should say it for him. Where science is involved, it is hazardous for those who do not themselves know, to attempt to express the knowledge of others. Dr. Lee is certainly a learned man—and so far as we have witnessed, an accomplished gentleman; we think the farmers of Franklin were fortunate in procuring the services of a teacher so able for the occasion, but should ourselves have felt better instructed by the practical experience of some of their own number. We hold to the belief that *County Addresses* should be the product of the *County*.

Oct. 8, 1853.

HEAVY SPADE VS. LIGHT FORK.

Dickens, in Household Words, gives an account of a trial of the comparative merit of these two implements at an agricultural gathering at Tiptree, the seat and farm of Mr. Mechi. The spade used was the ordinary farm spade, while the fork was two pounds lighter than the ordinary agricultural fork. It was ascertained that the fork would dig up easily hard strong ground that the spade could not efficiently do. The prongs of the light fork yield place to the stones and bend round them, loosening the soil and springing instantly when withdrawn into their original form.

A trial was also had between the light fork and the ordinary rigid and broad-bladed fork. “The man with the light fork earned four shillings while the other was earning two shillings and three pence, and the heavy fork after the match, required an outlay of sixpence for repairs. The savings in repairs and renovation, pay for the light fork several times in the course of the year, and in the labor the saving is so great that the man using this fork is said to lift—by the saving of two lbs. in each effort—five tons less in the course of a day’s work than his old-fashioned neighbor. It was ascertained by repeated trial that laborers with the light fork were able to perform their work more thoroughly with a saving of twenty per cent of labor. These forks were composed of

five narrow prongs of cast steel, completed in one solid joint without joint or weld.”

• For the New England Farmer.

RUSSET APPLES, &C.

MR. EDITOR:—I was interested in reading your description of the Hunt Russet Apple, in the weekly *Farmer* of Nov. 27th, 1852, and I wish to make some further inquiries. I think I may have the same kind, but am not certain, as I obtained it under a different name. You say, “We are inclined to think that the Hunt Russet is identical with the apple described by Cole, Downing and Thomas, as the *English Russet*.” (a.) Cole, in describing the American Golden Russet, calls it also Hunt’s Russet, and says, “Origin, Hunt farm, Concord, Mass.” Again you say, “The tree is slow in coming into bearing.” (b.) Is it so when grafted on bearing trees, or only when raised from the ground? My scions were completely covered with blossoms the second spring after setting; the apples are reddish in the sun, and fully answer Cole’s description of the American Golden Russet, under which name I received the scions. Do you think they are the true Hunt Russet? (c.)

More than forty years ago, a kind of apples were introduced into this section, called the English Russet, and fifteen or twenty years afterwards, others called Roxbury Russet. The only difference that I know of in the trees or fruit is, the English Russet is greener, more acid, and keeps a little later. They may have been, originally, the same.

The Red Russet, though comparatively new, I think bids fair to take the precedence of all late-keeping apples. It is a great grower. In my nursery of more than thirty kinds, I find it only equalled by the Hubbardston and Baldwin. The apples keep very late. A friend gave me a few last winter, and, although they were much handled and exposed, they kept much better than my Roxbury Russets. To be short, from the best information I can obtain, the trees grow and bear as well as the Baldwin, and are adapted to the same kind of soil; the quality of the apple is as good as the Baldwin, and they will keep at least as late as the Roxbury Russet.

The question has been asked, Will scions, taken from young trees, bear as soon as those taken from old ones? The following kinds, taken from small nursery trees, blossomed the second spring after setting, and bore fruit the same season: Red Astrachan, Cole’s Quince, Bars, Hawley, Minister, Ladies’ Sweeting.

WM. G. CHURCHILL.

Deerfield, N. H., Oct. 1st, 1853.

REMARKS.—(a.) It has been supposed by many persons that the old English Russet and the Hunt Russet are identical; but, from a careful comparison of the two, we are confident that such is not the case. The *Hunt Russet*, undoubtedly, originated where Cole locates it. (b.) When grafted on thrifty trees, the Hunt Russet grows well, but not so rapidly, we think, as the Baldwin or Hubbardston. (c.) No: not if they agree with Cole’s description of the English Russet.

PREMIUMS AT THE MIDDLESEX CO. EXHIBITION.

FARMS.—For reclaiming bog meadows, \$12 to James Taylor of Carlisle. Best cultivated farm—1st prem. 25. Elijah Wood, Concord; 2d. 15, Sam'l G. Wheeler, Concord. Best apple orchard—Benj. Wellington, Waltham, 12; Horace H. Bigelow, Marlboro', 10; Asa Clement, Dracut, 10.

PLOWING.—Double teams—1st prem. \$10, Nathan Brooks, Princeton; 2d 7, Jacob Baker, Lincoln; 3d 6, H. A. Sheldon, Wilmington; 4th 5, John W. Rice, Sudbury. Single teams—1st prem. 10, S. G. Sheldon, Wilmington; 2d 7, Horace Heard, Wayland; 3d 6, Nathan Smith, Waltham; 4th 5, S. G. Wheeler, Concord. Horse teams—Buckley Moore, Framingham, 10; Jude Damon, Wayland, 7; Samuel A. Thomas, do, 6; Elijah Wood, Concord, 5.

SPADING.—Enoch Garfield, \$5; Michael Flannery, 4; H. C. Watts, 3; J. Harrington, 2; Patrick Murphy, 1.

MILCH COWS.—Alderny—E. M. Reed, of Tewksbury, \$8; A. S. Lewis, Framingham, 5. Best Dairy of Cows—Jonas Viles, Waltham, 10. Single Ayrshires—J. B. Moore, Concord, 8; A. S. Sheldon, Wilmington, 6; Converse Smith, Waltham, 4. Extra Ayrshires—A. S. Lewis, Framingham, 8; John Reynolds, of Concord, 5. Devon—A. G. Heywood, 8.

HEIFERS.—Milch Heifers—1st premium, \$6, Geo. M. Barrett, Concord; 2d 4, Jonas Viles, Waltham. Two years heifers—1st premium 5, Geo. F. Wheeler, Concord; 2d, 3, Geo. M. Barrett, Concord. Yearling heifers—1st premium 4, E. G. Reed, Boxboro'; 2d, 2 John Hosmer, Concord. Heifer calves—1st premium 4, John B. Moore, Concord; 2d. 2 Wm. Spencer Lowell.

FAT CATTLE.—H. A. & S. A. Coburn, Lowell, \$8; Nathan Pratt, Sudbury, 6; J. B. Moore, Concord, 5.

STEERS.—John Gragg, Bedford, best 3 year old, \$6; John Lawrence, 2d, 3; Nathan Pratt, Sudbury, 5, best 2 yr old.

HORSES.—1st premium, \$10, Benj. Thurston, of Lowell, for Black Hawk horse; 2d, 5, Jeremiah Gilson, West Cambridge. Mares—1st premium, 5, John Hosmer, Concord; 2d, 3, John W. Rice, Sudbury.

SWINE.—Best boar, T. W. Wellington, Shirley, \$6; breeding sow, H. Sheldon, Wilmington, 6; best lot pigs, James P. Brown, 5; H. Sheldon, 3.

POULTRY.—Turkeys—1st premium, \$3, William Spencer, Lowell; 2d, 2, K. A. Shaw, of Concord. Geese—1st premium, 3, George F. Hartwell, Lincoln. Fowls—1st premium, 3, James A. Bassett, Concord; 2d, 2, S. Mason, Concord.

VEGETABLES.—Best lot—1st premium, \$5, J. B. Moore, Concord; 2d, 3, Abiel H. Wheeler, Concord; gratuities of 1 to Wm. W. Wheldon, Samuel G. Wheeler, A. W. Putman, of Concord; and Samuel Bird, of Framingham. Best show of Melons—2 to J. B. Moore, of Concord; best melon, 1 to J. Gammell, Lexington.

BUTTER.—John Farwell, Framingham, \$3; Elijah M. Reed, Tewksbury, 2.20; Sherebiah Spaulding, Chelmsford, 2; Wm. F. Banvard, Marlboro, 1.50; Buckley Moore, Framingham, 1.

BREAD.—To Married Ladies—1st premium to

Mrs. C. W. Goodnow; 2d to Mrs. Cynthia Howe; 3d to Mrs. M. K. Prescott. To Unmarried Ladies—1st premium to Margaret Lyons; 2d to Harriet Farrar; 3d to Margaret Hamburg.

NEGLECT OF PASTURES.

No part of the farm in Maine is more useful or profitable than our pastures, and no part of our farms, as a general thing, is more neglected. In the first place, we neglect them when they are first cleared up and ready to sow or seed down, because in nine cases in ten we do not sow a sufficient quantity of seed nor a sufficient quantity of grass seeds. A friend of ours, who has travelled in England, observing the different modes of farming among them, informs us that their best pastures were originally laid down with a greater variety of grasses than we ever think of using.

In the next place, we neglect, or rather abuse, our pastures by overstocking them, thus carrying from them much more than is returned. Again, a large proportion of our pastures are shamefully neglected, by allowing bushes, such as cedars, hardhacks, sweet-ferns, alders, and also brakes, to usurp the place of grass. We know of some, where these intruders take up at least three quarters of the territory, so that while the owner claims that his cattle have the range of twenty-five acres of pasture, they cannot graze but about eight acres of grass, for there is not more than that space occupied by grass. A little attention and labor in cutting these bushes, by burning them off and scattering a good supply of grass seed on to these burnt places, would greatly improve the premises.

Some assert that cattle and other animals that run in pastures, leave as much as they take off. This may be partially true in some instances where cattle are not taken out from the time they are put in until housing time, but where they are taken out at night and yarded, as in the case of milch cows, this cannot be true. There is thus a gradual diminution of the fertility—a slow but sure carrying away of the elements necessary to keep up the growth of grass, and nothing returned. Now it will appear evident to every inquiring and reflecting mind, that it will be necessary to refund, in some shape or other, a sufficient quantity of material to supply nourishment to the grass and other herbage made use of by the cattle that eat it.

Your pasture land is the *mill*, and your cow the operator to turn grass into milk, butter and cheese. Now when the raw material has become exhausted, your *butter-mill* must stop, or run so feebly as to be unprofitable, as sure as your cotton mill must stop or run feebly when the cotton or raw material is all gone. The dictate of wisdom and common sense would be to supply an abundance of material for the operator to convert into the article you desire.

It would not be very convenient to manure pastures with animal manures from the barn-yard, unless they were plowed up and cultivated. As most of our pastures cannot be very conveniently cultivated, this mode of renovating them cannot be resorted to. But fortunately there are other modes of dressing land, such as plaster of paris, ashes, lime, salt, guano, super-phosphate of lime

in the shape of bones pulverized and prepared for the occasion.

Some one of these may supply the place of the missing material, and keep up the fertility of your pastures, and consequently the profits arising from grazing them. The subject is worth much thought and careful experimenting.—*Maine Farmer.*

THE ARAB HORSE.

Layard, the explorer of Nineveh, who is as familiar with Arabs as he is with antiquities, gives in his late work, *Assyria*, some curious details respecting the true horse of the desert. Contrary to the popular notion, the real Arabian is celebrated less for unrivalled swiftness than for extraordinary powers of endurance. Its usual pace are but two—a quick walk, often averaging four or five miles an hour, and a half running canter; for only when pursued does a Bedouin put in his mare to full speed. It is the distance they will travel in emergency, the weight they will carry, and the comparative trifle of food they require, which render the Arabian horse so valuable.

Layard says that he knew of a celebrated mare which had carried two men in chain armor beyond the reach of some Aneyza pursuers. This mare had rarely had more than twelve handfuls of barley in twenty-four hours, excepting during the spring when the pastures were green; and it is only the mares of the wealthy Bedouins that get even this allowance. The consequence is that, except in the spring, the Arab horse is lean and unsightly. They are never placed under cover during summer, nor protected from the bitter winds of the desert in winter. The saddle is rarely taken from their backs. Cleaning and grooming are strangers to them. They sometimes reach fifteen hands in height, and never fall below fourteen. In disposition they are docile as lambs, requiring no guide but a halter; yet in the fright or pursuit their nostrils become blood-red, their eyes glitter with fire, the neck is arched, and the mane and tail are raised and spread out to the wind; the whole animal becomes transformed. The vast plains of Mesopotamia furnish the best breeds, and these breeds are divided into five races, of which the original stock was the Koheyleh. The most famous belong either to the Shammer or to the Aneyza tribes. Their pedigrees are kept scrupulously, and their value is so great that a thoroughbred mare is generally owned by ten or even more persons. It is not often that a real Arabian can be purchased. The reason is that on account of its fleetness and power of endurance it is invaluable to the Bedouin, who, once on its back, can defy any pursuer except a Shammer or Aneyza with a swifter mare than his own. An American racer, or even an English hunter, would break down in those pathless deserts almost before an Arabian became warmed up to its work. Where thoroughbred mares have been sold they have brought as high as six thousand dollars; but these, it is understood, are not the best of the race.

The Arab who sells his mare can do nothing with his gold, and cannot even keep it, for the next Bedouin of a hostile tribe who comes across his path, and who has retained his mare, will take it from him and defy pursuit. Layard thinks that no Arabian of the best blood has ever been seen in England. If this is so, we can scarcely sup-

pose that any have come to America, but must believe the so-called Arabians given to our Government at various times, to be of inferior breeds. Rarely, indeed, are the thorough-breeds found beyond the desert. It will be a subject of regret, to those who admire fine horses, to learn that the Arabian is considered to be degenerating, the consequence of the subjugation of Arabia, and the decline of the Bedouin tribe.—*Phila. Bulletin.*

For the New England Farmer.

A GOOD COW.

MR. BROWN:—In February, 1852, I asked you some questions as to what kind of a cow I should keep, as I wished to keep but one. I now wish to acknowledge my obligation to you for the information you gave me through the March No. of the *N. E. Farmer*, by which I selected the cow I now have. She is a cross of the Native and Galloway, and will not come up to some of your Middlesex county cows, but is very good for this place. She was seven years old in June, 1852, and gave in June, July and August, last year, 2607 lbs. or 976 qts. of milk, beer measure; 2 lbs. 11 oz. to the qt. In the whole year up to April 1st, 1853, the time I dried her off, about five weeks before she calved (she then gave over 2 qts. per day) she had given 7473½ lbs., or 2780¼ qts. I weighed the milk night and morning, every day, through the time. Her feed was one qt. of meal and three of fine feed per day. Her pasture through grass time, was a lot of thirty-seven rods, except six weeks that she was in a lot that I could have a privilege in at about one dollar per week. This year with the same pasture she gave in July and August, 4034 lbs. or 1501 qts. of milk, or 531 qts. more than last year in the corresponding three months. The second week in June she averaged 20 qts. per day; 55 lbs. was the most in any one day; we could have made 17½ lbs. butter from that week's milk; but we sell the most of the milk at the door at 6 cts. per quart.

JAMES THOMPSON.

REMARKS.—We are gratified that our friend succeeded so well in acting upon our suggestions.

For the New England Farmer.

HORSE RADISH.

MR. EDITOR:—Dear Sir,—Will you inform me, through the columns of the *Farmer*, of which I am a subscriber, of the best or proper method of cultivating horse-radish for the market.

We have in our garden, and in the grass land near it, an abundance of this root, growing spontaneously, and I have thought, with a little seasonable labor, it "would pay" to cultivate it, and hence, be a new mode with me, of "turning the soil and the penny." Respectfully yours,

Mason, N. H., Sept. 21, 1853.

G.

☞ The peach originally was a poisonous almond. Its fleshy parts were then used to poison arrows, and it was for this purpose introduced into Persia; the transplanting and cultivation, however, not only removed its poisonous qualities, but produced the delicious fruit we now enjoy.

CATTLE SHOW AT NORTHAMPTON.

The Annual Exhibition of the *Hampshire, Franklin and Hampden Society* took place at Northampton, on Tuesday and Wednesday, the 11th and 12th insts. The weather was favorable, and all circumstances seemed to conspire to make the occasion an agreeable and profitable one. The morning of the first day was bright, with a cool and bracing air, so that the men of the hill-country and of the valleys, with their pleasant wives and daughters, came out with hearty good will to join the happy festival. We were fortunate in being on the ground early in the morning to see the cattle, horses, sheep and swine, in single groups as well as collectively.

Our attention—after the stock had generally come upon the ground—was first directed to the *Swine*. The collection was not numerous, but there were several lots of fine proportions, which did credit to their keepers. There were none of entire purity of any one blood.

From the swine we passed to the *Sheep*, among which were the French and Spanish Merinos and Silesian; they appeared finely, and did not belong to that class of which there is "a great cry and little wool."

The *Working Oxen*, 25 pairs from South Hadley, and about as many more from Hadley, with many single pairs, attracted especial attention. They were mostly of the native breed, were of fine size and form, and, we believe, could not be excelled by an equal number of any other breed in the country; and when we afterward saw their skill and power when hitched to the cart and plow, we felt confirmed in the opinion, formed while standing by their side in the morning, that they cannot be excelled by any other breed for actual service on the road or farm. Whether they can be, as intended for the shambles, we are not so clear.

In the department of *Fine Cattle*, we have seen nothing at any of the Shows this autumn to compare favorably with those exhibited at Northampton. They were numerous and of the highest order. One pair exhibited by MOSES STEBBINS, of Deerfield, weighed 4,600 pounds. A pair from Hatfield, presented by Mr. BILLINGS, weighed 5,000 pounds. EDMUND SMITH, of South Hadley, presented a pair of steers, two years and nine months old, that weighed 3,070 pounds. The oxen by Mr. Stebbins were of the Devon blood, and the steers by Mr. Smith, of the Short Horn. A pair of four year old oxen weighing 4,380 lbs. which were very fine, were presented by CEPHAS MAY, of Conway.

Some excellent *Milch Cows* were on the ground, though there were not many in all, presented. One, owned by JOTHAM A. CLARK, had produced 15 lbs. and one ounce of butter in 7 days, with only the common pasture feed. She was bred by the President of the Society, the Hon. PAUL LATHROP, from his famous stock of Short Horns.

Among the *Young Cattle* we noticed marks of the Hereford, Short Horn, Devon and Ayrshire blood, mingled with our native. We were particularly pleased with a very fine short-horn heifer, the property of Mr. Lathrop, and another, one year and 12 days old, for which he could have taken \$200. These were Short Horns.

In the Exhibition Hall, the *Fruits* were abundant. Around a dish of the common crab apple, were thirty varieties of fine fruit, all springing from that common centre; reading to all a homily upon the effects of careful culture.

There was a fine variety of *Vegetables*, giving plenty of evidence that the garden is appreciated. The *Poultry* was in full feather—the cocks as noisy as ever, and the hens crammed in their narrow coops, speaking as loudly as they could—"I can't get out—I can't get out!"

There were very few *Farm implements*—Ketchum's Mowing Machine, and a Hay Cutter or two comprising the whole display.

What pleased us much was a *Hydraulic Ram*, set up, and, water being supplied, showing to all on the spot its practical working. This was worth more to the multitude, than whole quires of description.

The *Drawing Match* was well contested—load 3,000 pounds; teams and teamsters, skilful.

Of *Horses* there was a good show—some of them very fine.

Sixteen teams *Plowed*, mostly two horses; a pair of horses, owned and driven by Mr. ELISHA STRONG, of Northampton, while he himself held the plow, did the work with more ease, exactness and skill than we ever witnessed before; and this we say, living as we do, among many of the best plowmen in the country. Mr. Strong had no whip, and no loud word escaped his lips during the time he was engaged. There was perfect harmony between himself and team; a single low tone would arrest, or haw or gee them instantly, or quicken or decrease their movements. On coming out of the furrow and mingling with another team from the opposite land, a single word would extricate them with almost mechanical precision. That single exhibition of skill was the admiration of every beholder.

The services at the church were exceedingly interesting. The *Address* was by WM. S. KING, Esq., editor of the *Journal of Agriculture*. His subject was: "How can farming be made to pay," and the general divisions were,

1. That it does not now pay as it ought to, and as liberally as other occupations.
2. Why it does not pay.
3. How it can be made to pay.

The address embraced several topics not immediately connected with the main proposition, and altogether covered ground enough for a dozen such efforts. It was listened to with attention, and no

doubt many of its points will be remembered with profit.

After the address, a most interesting report was read by Rev. M. E. WHITE, of Southampton, on *Domestic Manufactures*.

At the dinner table, Mr. LATHROP, the President, introduced the company to each other in general terms, spoke of the pleasures of the Farmer's Festival, of the gratification and honor he felt in being the President of such an Association, and then introduced the Secretary, W. O. GORHAM, Esq., who spoke of the value and moral effect of these gatherings in the most brilliant and beautiful terms. Intermingled with the reports were short speeches from CHAS. L. FLINT, *Secretary of the State Board of Agriculture*, SIMON BROWN, and Dr. CLEVELAND, of Northampton. Many ladies were present and greatly enhanced the enjoyments of the occasion.

Our thanks are due the President and Secretary of the society, and to many acquaintances, for kind attentions during our stay in the charming vicinity of Mount Holyoke.

For the New England Farmer.

ESSEX COUNTY SOCIETY.

DEAR SIR :—The annual Exhibition of the Essex Agricultural Society took place agreeably to assignment, at the City Common in Lawrence today. Owing to the unfavorable state of the weather yesterday, its success was doubtless somewhat cramped; yet, under the adverse circumstances attending it, the established character of the society has been fully sustained. Although it was the coldest day of the season, and in the morning quite cloudy, a large concourse of people assembled to witness the display of the productions of well-directed industry and ingenuity with which the occasion abounded.

The combination of the scientific and the practical (marks of the progressive character of the age,) might be observed in all departments of the exhibition, as well as the more refined and cultivated taste of the community, which, in no small degree, is to be attributed to the well-directed endeavors of the *N. E. Farmer* and its kindred spirits, the pioneers in the warfare against bigotry, prejudice and its attendant conservatism.

Although there was the usual number and quality of cattle, horses, swine, fowls, sheep, &c. exhibited, I have only time to notice a few of the leading features in that department in which I take the greater interest, viz: the pomological division, in which there was a fine display. Among the pears I noticed the *Roi de Wurtemberg*, by E. EMERTON, Salem, Ms., the most attractive, decidedly, of any pear upon the table; and if it is susceptible of orchard cultivation, and its good looks do not belie the quality, it is destined to rival any pear of its time. The specimens presented by Mr. Emerton were very large, pyriform, golden yellow, with a beautiful red blush, a soft, pure skin, and a perfectly symmetrical form. If exterior indications are worth anything, then surely it is the prince of years.

The *Frederic de Wurtemberg*, by A. NESMITH,

elicited considerable attention. It is a splendid pear, of pyriform shape, with a stout soft stem, and tapering almost to a point at the stem; yellow ground, and red, approaching crimson cheek. Judging from the specimens of Mr. Nesmith, we should pronounce it a highly desirable variety for extensive cultivation; but Mr. S. W. COLE says (and his opinion is entitled to, as it receives, the confidence of the community,) it is rather variable and often worthless.

The *Jalousie*, C. F. PITMAN, of good size, fair, beautiful, russet, and sustains the reputation of an abundant producer, worthy of more extensive cultivation. Late fall.

The *Buerre Bosc*, C. F. PITMAN, elegant specimens, large, pyriform, tapering nearly to a point; a very attractive pear, of excellent quality, said to be a moderate growing bearer; last of September and October.

Specimens of the *Urbaniste*, large, greenish, with slight sprinkling of red, and a little russet, recommended by Mr. CABOT as one of the best late fall pears for general culture, and appears worthy of the distinction.

Time will not permit me to go into a detailed description of the numerous varieties presented on the occasion by Mr. MANNING, and many others; suffice it to say that the *Bartlett*, *Seckel*, *D'Arenberg*, *Duchess de Angouleme*, (that prince of large pears,) *Louise Bon de Jersey*, *Vicar of Winkfield*, *Flemish Beauty*, (whose beauty was far surpassed by others on exhibition,) *Dix*, *Pound*, and a host of others (I did not notice the *Winter Nelis*.) on exhibition were well represented, the excellent qualities of which bespeak a high compliment for the taste and discrimination of those who are engaged in promoting the production of excellent fruit in New England.

The apples in this section of the country may this year be considered a failure, consequent upon which their division of the tables did not quite come up to the usual standard. I noticed beautiful specimens of the grape, some very large bunches of *Black Hamburg*, well matured, raised at Lawrence in the open air. The *Sweet Water* looked well, and the *Isabella* nearly ripened.—There were but few plums and peaches. *Coe's Golden Drop* plum looked well, and sustains its reputation for long keeping. *Crawford's late Melocoton*, *Lemon Clingstone*, and *Red Cheek Melocoton*, the latter from the orchard of E. J. JACKMAN, Methuen, together with a plate of large white peaches, vied in beauty at least with their more early rivals. The City Hall was beautifully decorated with a large collection and variety of flowers, paintings, and exquisite needle-work.

The produce of the Dairy, if exhibited at all, escaped our notice. The *staff of life* did not appear in quantities equal to the attention it merits. The cabbages, squashes, onions, turnips, potatoes, melons, &c., were of good size and excellent quality, and on the whole, the exhibition passed off in a very agreeable, pleasant and quiet manner.

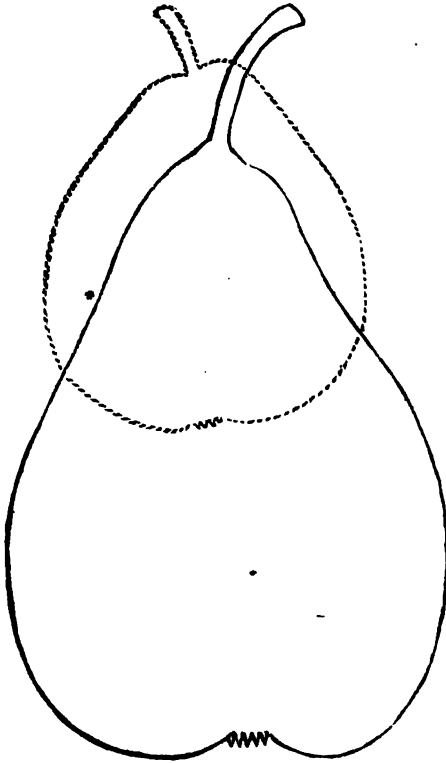
Yours, &c., G. S. WALKER.

Groveland, Sept. 29th, 1853.

REMARKS.—Some account of the Essex Exhibition has already been given, but as the above is chiefly devoted to descriptions of some of the fruits exhibited, it will be found timely and interesting.

SECKLE AND LOUISE BONNE DE JERSEY PEARS.

The Seckle (dotted outline) pear, with many cultivators, stands at the head of all pears, as regards *quality*. It is now introduced into every fruit garden. Downing says "it is the richest and most exquisitely flavored variety known. In its highly concentrated, spicy, and honied flavor, it is not surpassed, nor indeed equalled, by any European variety." When we add to this that the tree is the healthiest and hardiest of all pear trees, forming a fine, compact, symmetrical head, and bearing regular and abundant crops in clusters at the end of the branches, it is easy to see that we consider no garden complete without it. The soil should receive a top-dressing of manure frequently, when the size of the pear is an object. The Seckle pear originated on the farm of Mr. Seckle, near Philadelphia.



The Louise Bonne de Jersey is one of the best among the new autumn pears; many place it among the five or six best pears known. It succeeds admirably in New England, being hardy and productive, the tree making fine upright shoots. The fruit is large, the skin glossy and smooth, pale green in the shade, and overspread with brownish red in the sun, but sometimes becoming quite crimson. In season in September and October.

EXTRACTS AND REPLIES.

Will you inform a subscriber whether the good effects of guano would be impaired, if put on the land at the same time with wood ashes. (a.)

Another question—Is reclaimed swamp land a proper soil for raising grain? (b.)

REMARKS.—(a.) If the guano and ashes are thoroughly incorporated with the soil, we should not fear any unfavorable effects from such an application.

(b.) On meadows that are drained twelve to eighteen inches below the surface, we have seen almost every crop of the farm growing in great luxuriance; but as a general rule, we think it would be unsafe to recommend the cultivation of the cereal grain on our common reclaimed meadows.

To "A VERMONT."—In answer to the inquiries of "A Vermonter," we would simply say, that our prices current are examined every week, by dealers in the several commodities about which he seems so desirous of being informed, and the prices are varied to suit the current prices of the articles sold. Not being produce-dealers or market-men ourselves, we are obliged to rely upon others for our information, and if any of our readers are deceived by such data as are given in the *Farmer*, it is because we also are made sharers of the same deception. It is our intention, and our effort, to spare no pains in making every department of the *Farmer* reliable and correct; and our readers may be assured that if anything seems wrong, it is not the result of intentional neglect. In reply to your inquiry about *grasshoppers*, we have not heard that they have been destructive the past season to any but the grass crop and pasture. In some sections of New England the pastures were cut off so that feed was very short; but the abundant rains have afforded good feed generally in the Northern States, since July. There is no failure to our knowledge, in any of the usual crops. The hay crop will be an average one, after all the fears that were entertained. The apple crop will be short.

SWALLOWS.—The barn swallows mostly left this locality between the first and tenth of August; the last that I noticed was on Sunday, Aug 27th, when two were seen. On Friday, Sept. 16th, in the afternoon, large numbers of the white-bellied swallow (apparently several hundreds) were seen for some hours. They left before night, and have not since appeared. I do not recollect seeing a single swallow since that time.

S. BATES.

East Bridgewater, Sept. 26th, 1853.

J. H., Temple, N. H., and E. C. H., Plymouth, Gurnet, Mass., will please accept thanks for interesting letters in relation to the habits of birds. We do not publish all letters that we receive on this subject, but intend to compile by and by something reliable from them regarding the habits of our New England birds.

FRIEND BROWN.—You have requested information from different localities, to know when the swallows left. The last I saw was on the 4th inst.; the chimney swallows left here 8 or 10 days before that time. I wish you or some of your subscribers would explain to me a little occurrence that I saw about 30 years since. There was a piece of salt marsh diked in to keep the salt water off—perhaps 25 or 30 acres—and the owners flowed it with fresh water. How many days the water had been on I don't know; but when I was there, in March, there were hundreds and I don't know but thousands of swallows flying over the water; they would fly up a short distance, then go down, as if they were going to dive into the water, and then scale along close to the surface and appeared to be very uneasy; it was more than a month before any swallows came about the barns.

Please tell me where they came from so early, if you can.
ISAAC BROWN.

Thomaston, Me., Sept., 1853.

REMARKS.—Is this not another pretty strong evidence that swallows do sometimes retire and pass the winter beneath the surface of the ground? Friend BROWN will accept our thanks for this interesting fact.

J. C., Chelsea.—A few lines in *New England Farmer*, No. 34, read, "To lay out an acre of land in a square form, measure 209 feet on each side, and you will have the quantity within an inch."

Knowing that you wish to give only correct information, you will accept the following statements.

To lay out an acre of land in a square form, measure 208 feet $8\frac{1}{2}$ inches on each side, and you will have the quantity within a little less than 5-6 of a square inch.

From **G. F. N., Randolph, Vt.**, about *Husking Corn*. "Take a stick about the size and length of a common rake tooth, pointed at one end, and held across the right hand by a string passing around the middle finger and tied to the stick. By this pointed end coming in contact with the thumb (being $\frac{1}{2}$ an inch above the forefinger) the toughest husks may be split, thus entirely saving the wear and tear of the fingers and finger-nails in separating them. Try it once! you can make one in five minutes."

PEARS. Nouveau Poiteau.—Mr. ANDREW LACEY, a skilful cultivator of fruits at Marblehead, handed us a pear of the above variety which we found very fine, capable of being pressed into a pulp like butter or a luscious peach upon the tongue. He describes it as a free grower and bearer, hardy and having a beautiful form and foliage. Having tested the fruit, we should have no hesitation in recommending it as worthy of a place in every garden, if the other requisites he describes are correct, which we have no reason to doubt. In shape and size the fruit somewhat resembles the Bartlett.

BALDWIN APPLES.—C. E., *South Hadley, Mass.*, the largest we ever saw. It is not uncommon that the Baldwin bears the odd year; your trees may be made to bear every year, perhaps, by high cultivation.

PEARS.—From C. H., *Harvard, Mass.*; the specimens left are the *Louisa Bonne de Jersey*, one of our most excellent autumn pears.

SQUASHES.—A bouncer from **JOSIAH GILSON, Proctorsville, Vt.** He says it is one of nine raised from two seeds. The weight was, of one, 60 lbs.; two 56 lbs. each; two 50 lbs. each; one 45 lbs.; two 36 each, and one 30 lbs., making in all 420 lbs. This comes in the "nick of time," friend Gilson, for our's have "all gone to the bugs!"

For the *New England Farmer*.

MIGRATION OF BIRDS.

MR. EDITOR.—Having seen a notice in your paper requesting information in regard to the departure of the swallows, I take the liberty to make a few remarks on the migration of the swallow, and a few other birds with which I am most familiar. Their arrival in spring is an interesting period, as well as their departure in autumn. The time of their arrival last spring is kept in my register as follows:—Blue birds and robins appeared March 21st, black birds March 27th, phoebe April 1st, barn swallow April 28. Swallows commenced nesting May 4th; last brood left the nest August 12th; first meeting preparatory to departure, August 8th; first departure, Sept. 1st. The other birds, I believe, have not yet departed.

The great meeting of the swallows preparatory to their departure took place August 8th. Hundreds of swallows were assembled over a smooth pasture, skimming the ground in all directions, apparently with no other object than teaching their young to fly; their swift wings cutting the air with uncommon rapidity, as if animated in view of their immediate departure. At a short distance above this beautiful assemblage, were seen about 20 night hawks, whose broad, expanding wings and delightful gestures betokened a gala day for them. After this day the swallows began to disappear, and yet their decreasing numbers assembled from day to day to exercise their tiny wings preparatory to their final departure. For several of the last days of August I seldom saw more than two at a time. In 1852, August 12th, their great meeting took place, and in two or three days they were all gone.

Respectfully yours, D. BUCKLAND.
Brandon, Vt., Oct. 1st, 1853.

FRAUD IN FRUIT TREES.—The *Worcester Spy* states that during the past two seasons various counties have been visited by pretended travelling agents of large and well known nurseries. Those who have been inveigled into purchasing fruit trees of them, have almost invariably been disappointed in their trees, some to such an extent as to refuse to set them out. These trees are said to be manufactured in an obscure part of the State of New York, by the process of root grafting, which is done

by taking the roots of old trees in the winter, and cutting them up into small pieces—into each of which is grafted a scion. These are planted in the spring, and grow vigorously for three or four years, but soon come to a stand, assuming the appearance and decrepitude of old trees. Many kinds, naturally good bearers, when propagated in this way, will hardly bear at all.

THE GREAT GYPSUM FIELD.

We publish below a short description of the Gypsum field we spoke of last week, from the pen of Mr. Shumard, of this city, who acted as geologist in the expedition under Capt. Marcy, in his reconnoissance of the headwaters of Red River. Anything coming from Dr. S. may be relied on, as he is a man of close and scrutinizing observation, and as a geologist is undoubtedly the best in the State. The exploration of the great desert of America is opening new wonders in respect to the minerals, &c., of that unknown region, and the wandering tribes that inhabit it. The Gypsum Field being so extensive, is not the least one, of the discoveries being made, by explorers; and of itself, will open an immense trade at some future day, all of which will have to pass through the State of Arkansas. Here, we present one inducement, not a small one, for building the Pacific Railroad from Fort Smith.

MR. EDITOR:—The immense field of Gypsum discovered by the late exploring expedition to the headwaters of the Red River, having excited considerable interest in the public mind, a few remarks upon the subject may not prove uninteresting to the readers of the *Herald*.

The field is probably the largest in the world, and extends from the Wachita mountains to within a short distance of the nearest Mexican Province. Throughout the entire extent, the Gypsum presents itself to the surface in such a manner as to be very easily worked, and is of the purest quality. Not unfrequently we travelled for miles over continuous beds, which, from their whiteness, and the great abundance of glittering Selenite (transparent Gypsum) they contained, added greatly to the interest of the scenery; while here and there immense bluffs—often several miles in extent, and thickly capped with the same material, projected to the height of two or three hundred feet above the level of the surrounding country. In many places it was observed to be twenty feet in thickness.

Gypsum, which, when burnt, produces the Plaster of Paris, is one of the most important substances in nature. Besides being one of the very best fertilizers of the soil, it is largely used for building and ornamental purposes, and is every year becoming more and more important, in a commercial point of view. Hence its discovery, in inexhaustible quantities, cannot but be looked upon with the utmost degree of interest.

Should the contemplated railroad to the Pacific extend through this region of country, the value of this deposit could hardly be too highly estimated. Here there is enough gypsum to supply the whole world for centuries to come, while its great purity and the comparatively trifling expense that would attend the working of it, are at once suffi-

cient to indicate the large amount that would be annually transported to market.

—*Fort Smith Herald*. GEO. G. SHUMARD.

FLAX.

SAXTON, of N. Y., has published in beautiful style, a Lecture of 52 pages, by JOHN WILSON, of Edinburgh, or London, on the treatment, agricultural and technical, of this crop. Since cottons are so cheap, this crop has been sadly neglected, and a field of flax, a swingle-board or "linen-wheel," are things unknown to the young farmer. The straw can now be converted into the dressed fibre in a few hours, instead of going through the tedious process of rotting it on the ground, and then breaking, swingling, hatchelling, and combing it as formerly.

Mr. Wilson says that a very large sum, \$14,000,000 to \$15,000,000, is annually expended by the United States in the purchase of linen goods from Great Britain, which country is obliged to procure the raw material for their manufacture from other countries with which the U. S. has no commercial relations.

For sale by Tappan & Whittemore—price 25 cents.

THE LITTLE MARTYR.

Halley, Canada East, October 12th, 1853.

DEAR SIR:—Please inform me as soon as possible who is the Treasurer of the association which contemplates the erection of a monument to the noble little boy who would not steal, near Chicago, as there are many here who would be happy to contribute to so noble an object. Any information which you will give in the next issue of the "*Farmer*" will be gratefully received.

A deep interest is manifested here in the conduct and glorious end of that dear little fellow. Doubtless many would be glad to give, if they knew where and to whom.

Respectfully yours,

J. W. B.

✉ In reply to the above we would say, that a committee of twenty has been appointed, to raise a fund to erect a monument to the young hero, KNUD IVERSON, and any sums of money designed for this object may be forwarded by mail or otherwise to S. L. BROWN, Chicago, Illinois, who is the treasurer of this committee. It is desirable that at least one thousand dollars should be raised for this purpose, and five times that sum might be appropriately used. Contributions will be duly acknowledged in the Chicago papers. We hope there are many among our readers who will contribute their mite towards perpetuating the remembrance of the noble deed of young Iverson.—Should any of our friends prefer to forward their contributions to our care, we will acknowledge the same in the *Farmer*, and transmit the sum collected to Chicago.

The following letter, addressed to a gentleman in Chicago, by a little boy in Cincinnati, will be

read with interest. Is it not delightful to find such sentiments pervading the hearts of the young?

DANIEL ELSTON, Esq.,—DEAR SIR:—I read in the Cincinnati papers an account of the little Norwegian boy, Knud Iverson, "*who would rather die than to steal.*" That little boy set an example for both old and young. Let that noble deed be told to all little boys and girls—let it live generation after generation. I heard that many boys were going to send money to have a monument erected to him. I am only nine years old. If I was older I could write better and send more money. I can only send one dollar. I did not know who to send my letter to, but I thought you was the person because I saw your name in the papers, so I send it to you, Mr. Elston. Please give it to the person who has charge of it, and I will thank you very much. I could have asked my father for more money, but would rather send my own earnings, and one dollar is all I have now.

THEODORE A. BLINN.

Cincinnati, Sept. 25th, 1853.

THE GREAT HORSE CONVENTION.—Yesterday was a proud day for Springfield, and for the horses, and for the riders and the owners—and for the landlords especially. All the taverns were overrun last night, and strangers had to retire into the suburban towns to sleep. The horses could sleep standing. There were five or six hundred of the finest animals in the country, abroad during the day, and the way they trotted and cantered and pranced and showed off their good points was beautiful to behold. The stately stallion, the gentle palfrey, the roadster, the pacer, the racker, the draft horse, the race horse, breeding mares, colts and ponies, all seemed conscious that it was their day, and that the eyes of the world were upon them. The show has been well managed by the enterprising citizens of this thriving inland city. It pays abundantly. Gentlemen connected with the press have honored their invitations to a very extensive extent. The weather is also propitious, and the exhibition will undoubtedly be carried through the week triumphantly.—*Post*, 20th.

FALL CARE AND FEEDING OF SHEEP.—Sheep should never be permitted to grow poor in the fall. Give them the best feed you can, and if consistent with your concerns, put them in the yard at night, if at all cold or stormy, and in the morning give them a little of the best hay you have, or a few oats, and after they have eaten turn them out again. Just remember at this season they need care and attention, and your own good judgment will probably suggest the way in which it can be most properly bestowed.—*Germantown Telegraph*.

SEWING MACHINES.—A joint stock company in New York has bought up and combined the three best sewing-machines in the country, and by this means produced an apparatus which approaches so nearly to perfection that it will probably deprive one class of the ill-paid seamstresses of the country of the scanty pittance they have hitherto been able to earn with their needles. The present is truly an age of improvement. The Ames Manufacturing Company of Chicopee is largely interested in this new enterprise, and Mr. James T.

Ames is the President of the Company we have referred to. The machines are being made in considerable numbers by the Ames Co., and are sold at \$100 each.—*Springfield Republican*.

A WONDERFUL PRINTING PRESS.

The *N. Y. Tribune* describes a printing press of wonderful capacities, just perfected by Victor Beaumont, a citizen of New York. It says:—

"The press, at a moderate rate of speed, will deliver *thirty thousand* sheets printed on both sides in a single hour! Its movement combines the original principles of Napier, which are applied by Hoe in his great press, with some new and beautifully simple arrangements and devices of the inventor. It has a large central cylinder like the Hoe press, on which are fastened the forms for both sides of the sheet to be printed. The type are held fast by Hoe's patent column-rules. The paper used is a continuous strip or band dispensing with men to feed the separate sheets as in other power presses. This strip or band Mr. Beaumont arranges very ingeniously; he avoids the inconveniences inseparable from having it in the form of a roll, by laying it in a pile, folded backward and forward like a piece of broadcloth; one end of this pile is put into the press, which then draws its own supply without tearing or straining the paper till the whole sheet has passed through. As there are no feeders, room is obtained for additional printing cylinders; a moderate sized press will have twelve of these, and will require three hands to run it, two of them, being employed in carrying and looking after the paper. Each twelve cylinder press will work four of these continuous sheets at a time, or one to each three of its cylinders. Each sheet will pass twice through; at its first passage, one of its sides will be entirely printed, the forms of the newspaper being impressed on it alternately. As it comes out, the machine lays it back again in the same sort of a pile, so that when it is done, the attendant supplies its place with a fresh pile, and then carries it to the proper spot for it to be taken up and passed through the second time, which prints the side left blank before. Then the mechanism passes it along to the knives which cut the sheets apart, while another contrivance puts them in neat piles ready for the carriers. These knives are very ingenious. A serious difficulty has been experienced in other machines designed to print a continuous sheet, from the fact that an ordinary knife cannot be relied on to cut paper which is wet enough for printing. This inconvenience Mr. Beaumont obviates by making his serrated, or saw-shaped knives with long and acute teeth. The points of the teeth easily pierce the paper, and once having obtained an entrance, the cutting is completed in an instant."

OUTRAGE AT BOSTON CORNER.—It is stated that the country for several miles around Boston Corner, where the late brutal prize fight took place, was the scene of rapine and robbery. Farm-houses were entered, and the inmates, men, women and children, knocked down indiscriminately and robbed. Passengers were knocked down in the streets and plundered, and the entire neighborhood alarmed for their lives. On reaching a railroad track, they placed logs and rails on the track to stop the train if the engine refused.

Ladies' Department.

DRESS.

[Horace Mann, in his lectures on woman, thus treats this subject:]

Is the world a Lunatic Hospital, that sometimes a lady's dress should be twice her height, and anon but half of it; that sometimes it should expand to the orbit of a farthingale, (when surely there was no want of amplitude in "woman's sphere,") and then be shrunken in swaddling-bands; that sometimes it should be trailed downwards to sweep the earth, and then built up, turret-like, on the top of the head,—so that, as Addison said of the women of his time, their faces were in the middle of them; and that sometimes the neck should be be-ruffed and be-puffed in the Elizabethan style, and then laid bare, with a vast anatomical mistake as to its nether boundary. This last unseemliness happens to be the shame of our day. When that Turkish officer, Amin Bey, on his late visit to this country, attended some fashionable parties at Washington, he remarked, that on going into our society, he expected to see *as many* of American ladies, but not *as much*. The more private exposures of the Model Artists were broken up as a scandal; but they have amply avenged themselves by taking many other spirits worse than the first, and going on public exhibition at Carusi's and Papani's, at all assemblies and ball-rooms.

I regard this monthly lunacy, too, in the changes of dress, as even more reprehensible in its motives than distasteful in its forms. The ignoble purpose is to make a display of superior wealth or to arrogate a higher caste, and thus to enforce upon others a sense of inferiority. Now, such motives, or emotions, all benevolent and Christian hearts must repudiate with abhorrence. It is the first impulse of a truly noble man, to temper himself to the condition of the inferiors whom he meets. He seeks to assuage the envy of bad minds, and the mortification of good ones, at the contrasts between his riches and their poverty, his elevation and their lowliness. A benevolent person will never put on airs of learning before the illiterate, nor of knowledge before the ignorant. He does not habit himself in his richest, but in the poorest garb, when he is to meet the humble and lowly in their mean attire. I would forbear to speak of my keen eye-sight in the presence of the blind, to make known my acute hearing to the deaf, and I would moderate my steps in passing a lame man, so that the painful idea of his own privation need not be forced upon him. There is no littleness more little, or despicableness more despicable, than the ostentation of covetable qualities before the consciously inferior. However high a man may seem to be raised by any enviable attribute or possession, the meanness of striving to make it an ostentation or a boast, proves that his real nature is antipodal to the accidents of his position. Yet these contemptible and criminal motives in regard to dress are the very life and power of that hollow Olympus, where dwell the lawgivers of fashion. In these motives originate those changes of dress, which come, as other lunacies were once supposed to come, with a change of the moon. Hence the discarding of a dress, as soon as it is seen to be worn or imitated by those in a supposed inferior condition. Hence, too, the low malice of

equipping a servant in the costume of a rival "Lady Patroness;" and the spirit, equally low, that cares for it. Among the infinite of remorse and mortifications which will throng around the death-bed and the judgment-day, will there be anything that can make the offender feel quite so mean, as the retrospect and exposure of a life spent in the vulgar ostentation of dress, and in striving to make fellow-beings feel inferior for no better reason than because they happened to be clothed from a different set of animals and plants?"

Boy's Department.

A LESSON IN GRAMMAR.

Of parts of speech, grammarians say,

The number is but nine,

Whether we speak of men or things,

Hear, see, smell, feel or dine.

And first we'll speak of that called *Noun*,

Because on it are founded

All the ideas we receive,

And principals are grounded.

A noun's a name of anything,

Of person, place, or nation;

As *man* and *tree*, and all we see

That stand still or have motion.

The *Articles* are *A* and *The*,

By which these nouns we limit;

A tree, the man, a pot, the pan,

A spoon with which to skim it.

The *Adjective* then tells the kind

Of everything called *Noun*;

Good boys or bad, girls glad or sad,

A large or a small town.

The *Nouns* can also agents be,

And *Verbs* express their actions;

Boys run and walk, girls laugh and talk,

Read, write, tell wholes or fractions.

To modify these *Verbs* again,

The *Adverb* fits most neatly;

As *James correctly* always writes,

And *Jane* she sings so sweetly.

The *Pronoun* shortens what we say,

And takes the place of names,

With *I, thou, he, she, we, you, they,*

Where sentences we frame.

Conjunctions next we bring to join

These sentences together;

As *John and James* may go to town,

If it should prove good weather.

With *Nouns* and *Pronouns* we have need

To use the *Preposition*;

Which set *before* or placed *between*,

Expresses their position.

The *Interjection* helps to express

Our joy and sorrow too,

As when we shout *hurrah!* or cry

Alas! what shall we do?

ANECDOTE OF ISAAC T. HOPPER.

[Mrs. Ohlds, in her life of this excellent Quaker, relates the following incident:]

Isaac and his elder brother were accustomed to set traps in the woods to catch partridges. One day when he was about six years old, he went to look at the traps early in the morning, and finding his empty, he took a plump partridge from his

brother's trap, put it in his own, and carried it home as his. When his brother examined the traps, he said he was sure he caught the bird, because there were feathers sticking to his trap; but Isaac maintained that there were feathers sticking to his also. After he went to bed, his conscience scorched him for what he had done. As soon as he rose in the morning, he went to his mother and said, "What shall I do? I have told a lie, and feel dreadfully about it. That was Sam's partridge. I said I took it from my trap; and so I did; but I put it in there first."

"My son, it is a wicked thing to tell a lie," replied his mother. "You must go to Sam and confess, and give him the bird."

Accordingly, he went to his brother, and said, "Sam, here's your partridge. I did take it out of my trap; but I put it in there first." His brother gave him a talking, and then forgave him.

Advertising Department.

A limited number of advertisements of an appropriate character will be inserted in the monthly Farmer at the following

RATES.

For one square of 15 lines, one insertion.....\$1.00
For each subsequent insertion......50

The above rates will be charged for all advertisements whether longer or shorter.

Walnut Grove Nursery.



The subscribers would respectfully inform their friends and the public that, desiring to make a change in their nursery grounds, they will sell Apple Trees cheaper than ever before by the hundred. Our stock is large, embracing every variety worthy of cultivation. We get splendid roots, as our land is light and free.

We have also a very good stock of Pear, Cherry, Plum, Peach, &c. Grape-vines, Raspberries, &c. Ornamental Trees, Shrubs, Roses, Habaceous Roots, Creepers, &c. &c.

Apple Trees 7 to 9 feet high, \$15 to \$18 per hundred.
3,000 Silver Maple, 2 years old, \$15 per thousand.
2,000 do. do. 1 year old, \$12 do. do.
6,000 Apple Quince, 2 to 5 feet high, stout, fine, thrifty, stuff suitable to bud the pear on, \$20 per thousand.
10,000 Buckthorn, largest size, 3 years old, \$90 per thousand.
Smaller size, \$15 per thousand.

6,000 Apple Stocks, 2 years old, \$10 per thousand.
European Sycamore, \$10 per thousand.

Other things too numerous to mention in an advertisement. All orders will be promptly attended to, and the trees securely packed, when desired, for which an extra charge will be made. Catalogues sent to all post-paid applicants. All packages delivered in Boston free of expense.

JAMES HYDE & SON.

Newton Centre, Mass., Oct. 8, 1853.

7w*2

Fruit and Ornamental Trees, HEDGE PLANTS, SHRUBS, &c.



WILLIAM HALL, Bradford, Mass., offers for sale his usual assortment of Apple, Pear, Plum, Peach, Cherry, Apricot, Quince, Currant and Gooseberry Trees. Ornamental trees of large size.

A fine collection of Roses including the New White and Yellow Climbers. A fine stock of Buckthorn, Privet, Arbor Vitæ and Norway Spruce, plants for Hedges. Orders promptly attended to.
April 9, 1853.

tf

Fruit Trees.



Two thousand budded Apple Trees, fit for Orchard, may be had cheap for cash at wholesale or retail, by applying to JONATHAN BOYCE, Market Street, Lynn, Mass.

Also, Pear Trees.

Also, Seedling Apple, Cherry and Plums.
Oct. 8, 1853.

5w*7

Wachusett Garden and Nursery.

NEW BEDFORD, MASS.



ANTHONY & MCAFEE, Proprietors, invite the attention of the public to their extensive stock of FRUIT AND ORNAMENTAL TREES, Shrubs, &c., consisting in part of 15,000 Apple Trees, of all the approved varieties, three to five years from the bud, six to nine feet high, very vigorous and well formed heads, for orchard culture, in a bearing state, at reduced prices. Also,

CHERRY, PEACH, PLUM AND APRICOT TREES.

THIRTY THOUSAND Pear Trees, on Pear and Quince Stock, two to five years from the bud, four and a half to eight feet high, very vigorous, stocky and well formed heads, having been all headed in annually, embracing all the desirable kinds now cultivated, and warranted true to name.

American and Spanish Chestnut, the latter in a bearing state, price low. Also, Quince, Gooseberry and Currant Bushes, Raspberry and Strawberry Plants, Rhubarb and Asparagus Roots.

Deciduous and Evergreen Ornamental Trees, &c., suitable for streets, lawns and cemeteries.

Shrubby and Rose Bushes, a very choice collection.

Hedge Plants; Buckthorn, two to four years old.

Ossage Orange, two years, at reduced prices.

Bulbous Roots, Hydrangia Hortensis, Pæonies, twenty varieties.

Transplanted Norway Spruce, eight to twelve inches, by the one hundred or thousand.

Persons not fully acquainted with the relative merits of the different varieties of fruits, are assured that by merely designating in their order the number of each species wanted, such as Apple, Pear, &c., and the season of maturity, leaving the selection to us, none but the best varieties will be sent.

Our Trees are twenty per cent. larger than they were last spring, at the same price, and are second to none in the country.

NOTE.—Arbor Vitæ, Norway Spruce, &c., at reduced prices, and every other article in the line of our business, at as low prices as can be obtained elsewhere.

Our general descriptive Catalogue will be forwarded to all post-paid applicants. Also, our Annual Circular, containing a list of Pears on Pear and Quince Stocks, which we can furnish this season.

All orders promptly executed, and trees packed for safe transportation to any part of the United States, Canada, or Europe.

Please examine our Stock, and make your own selections. Letters addressed to ANTHONY & MCAFEE, New Bedford, will receive prompt attention.

Sept 24, 1853.

tf

French, English & Belgian Trees.



We respectfully solicit orders for Pear Trees, in Dwarf, Standard or Pyramid shape, on Quince or Pear roots; Apples on Paradise stocks; Cherries on their own roots, or dwarf on Mahaleb stocks; Plums in Standard or Pyramid. Stocks for budding, of Pear, Quince, Plum and Cherry; Seedling Ornamental Trees, as Larch, Norway Spruce, Horse Chestnut, Elm, Norway Maple, &c. Best English Gooseberries, Roses, &c. &c.

One of our firm has examined the stock of the principal Nurseries in Europe since the last season's importation, and we are possessed of such information as will enable us to secure for our customers the best of every sort of Nursery Stock, at low prices.

PARKER & WHITE,

69 & 63 Blackstone Street, Boston, Mass.

Sept. 24.

6w

Old Colony Nurseries.



Wanted, 5 to 10,000 Apple Stocks of good quality. Apply to B. M. WATSON, Old Colony Nurseries, Plymouth, Mass., where may be had every variety of Fruit and Ornamental Trees and Shrubs, Plants, Green-house Plants, &c.; also, Pear, Cherry, Plum, Paradise and Mahaleb Stocks, for Nurseries.

A great variety of young Ornamental Trees and Shrubs, from \$3 to \$10 per 100, for Nurseries or ornamental planting. Dahlias, Verbenas, Roses, Pea Heliotropes and Fachrias, new dwarf Chrysanthemums, (100 sorts,) Phloxes, Iris, Herbaceous Plants, Japan Lilies, &c., in great variety, including many new varieties lately imported. Strawberry plants in 50 varieties.

Carriage paid to Boston. Catalogues gratis, and prepaid on receipt of one stamp.

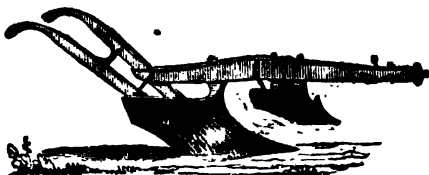
Feb. 26.

tf

Bound Volumes.

BACK VOLUMES of the NEW ENGLAND FARMER, elegantly bound in Muslin, Gilt and Embossed, are now for sale at this office.

THE BOSTON AND WORCESTER EAGLE DOUBLE PLOWS.



THE superior merits of these Plows, consist in,
1. The mode of attaching the forward mould-board to the beam, by which great strength and durability are secured, as also the various desirable changes in depth of work, and relative depth of each plow, the same being regulated to any shade of nicety, with perfect facility.

2. The entire and handsome overturning of the sod furrow, by the forward mould-board, to the extent of the whole width of furrow taken by the plow, placing it beneath, out of the way of the teeth of the harrow, cultivator, or other implement, so that it is in no case dragged to the surface in the after-cultivation of the crop.

3. The thorough and finished work done by the rear mould-board, in taking up its furrow of under soil and sifting or scattering it over the inverted sod, so as to entirely fill to the surface, and at the same time break open any undue cohesion of the soil, leaving the plowed land in a finely pulverized condition, requiring little labor with the harrow or other surface-working instrument,—and indeed, in all tolerably free loams, rendering the use of these instruments, as pulverizers, quite unnecessary.

4. The remarkably light draught of the plow, in proportion to the amount of work and the thoroughness of pulverization accomplished.

Several sizes of the BOSTON & WORCESTER EAGLE DOUBLE PLOW, are made by the subscribers, from patterns of their own original invention. They invite their friends and customers to examine these Plows, as to quality and durability of material, thoroughness and finish of construction, and to test their working properties.

Manufactory at Worcester, and Warehouse Quincy Hall, over the Market, Boston.

RUGGLES, NOURSE, MASON & CO.

April 30, 1853.

Oyster Shell Lime.

THE subscriber has been induced at the request of several of his friends in the farming interest, to enter into the manufacture of SHELL LIME, for farming purposes, and is now prepared to deliver at any of the railroads in Boston or Charlestown, the article in lots of from 10 to 100 barrels, at the low price of 35 cts. per barrel, or if taken at the kiln in Medford Street, Charlestown, at 30 cents. The money must be sent with the order.

Also, for sale, 100 barrels of Thomaston Lime, in lots to suit purchasers.

Application may be made at No. 70 State Street, Boston, or at the Kiln, situated on Gould's Wharf, (so called) Charlestown.

JAMES GOULD, Agent.

THE shell lime made into mortar, with four barrels of sand to each barrel of lime, will make a cement of better quality than the best of Thomaston lime, for cellar walls or stone work of any kind.

It also contains double the quantity of Phosphate of lime, than is contained in stone lime, consequently for farming purposes is much the cheapest.

March 26, 1853.

Muriate of Lime,

A superior article for top dressing Grass Lands, put up in barrels and delivered at the railroads in the vicinity. Proportion about three barrels to the acre.

JAS. GOULD.

May 21, 1853.

J. H. HAMMOND, Architect.

THE subscriber offers his services to those about erecting new, or altering old, buildings. He will furnish drawings and working plans, specifications, and every thing in relation to a clear understanding of what is wanted. He thinks he is able to present some new views in the construction of Barns, or in altering old ones, whereby more conveniences may be obtained and at less expense. His charges will be no moderate so to enable every farmer to avail himself of his services.

Address J. H. HAMMOND, Grafton, Mass.

April 9, 1853.

Farm at Auction.



The subscriber will sell at auction, on Thursday, the 3d of November next, at 2 o'clock, P. M., on the premises, his farm in Berlin, Vt., on the road leading from Northfield to Moretown and Waterbury, three miles from Northfield Depot, and nine from Montpelier. Said farm contains about 118 acres of excellent land, suitably arranged, and affords facilities for a dairy of from 16 to 20 cows, for raising stock, all kinds of English grain, hay and hops, and is well watered by never-failing springs. From the large quantities of muck and other natural resources on the farm, it may be easily raised to a high state of cultivation. There is a good barn, 30 by 40 feet, a dwelling house and other buildings on the farm.

Purchasers would do well to call and examine for themselves before purchasing elsewhere, as the farm will be sold as above, unless previously disposed of at private sale.

For further particulars, inquire of A. H. Rollins, on the premises, or by mail, post paid, to Northfield, Vt.

ALFRED A. ROLLINS.

Berlin, Oct. 15, 1853.

2w

A Farm for Sale,



Situated in the town of Sterling, one of the pleasantest towns in the county of Worcester; one mile from the centre of the town, stores, post-office, three-fourths from the depot on the Fitchburg and Worcester Railroad, and two hours' ride from Boston by the Nashua, Worcester and Fitchburg Railroad. The farm contains 100 acres of land, well watered, and fenced with stone wall, and suitably divided into tillage, mowing, pasturing and woodland.

Said farm is under a good state of cultivation, and contains a great variety of fruit trees, such as Apples, Pears, Peaches, Plums and Cherries, all budded and grafted and in a bearing state. The buildings consist of a two-story house, two barns, mill-house, carriage-house, sheds, and all the necessary out-buildings of a farm. The land has a gradual slope to the south, and is bounded on the southern part by Washacum Pond, a beautiful sheet of water of about 350 acres in extent, adding much to the scenery around. Altogether it is one of the most desirable farms for sale in the vicinity—sold on account of the owner's ill health, not being able to carry it on himself. Price \$3500.

For further particulars inquire of J. P. PRIEST, Broadway, Somerville, or of the subscriber on the premises.

JACOB PRIEST.

Sterling, Oct. 8, 1853.

61w

Farm in Westboro' for Sale.



One of the best farms in that well known good farming town of Westboro', late the property of Elihu Fay, deceased. Said farm is situated in the northerly part of Westboro', one and a half miles from the centre village, and Railroad Depot, and borders upon its eastern line, more than 200 rods upon the State Farm. It contains 208 acres, 3 quarters and 25 rods of land of superior quality, and state of cultivation, is easy of access, well fenced and watered, is good for tillage, produces a large quantity of hay, and pastures are of excellent quality. 29 acres of the above is woodland. A large stock of milch cows have been kept on the farm, and the milk taken by the Westboro' Milk Company, producing a large annual income.

The buildings consist of a large two-story house in complete repair, 56 by 38 feet, wood-shed, 23 by 124 feet, carriage-house, 30 by 16 feet, and barn, 90 by 30 feet.

For further information inquire of the widow Nancy Fay Westboro' Centre, Abijah Wood, Esq., Representative from Westboro', Col. Dexter Fay, Southboro', or Hon. Sullivan Fay, at the State House, or No. 7 Bowdoin Square, Boston. Westboro', March 26, 1853.

1f

Farm for Sale.



A valuable farm situated in the south-eastern part of Hubbardston, Worcester Co., about two and one-half miles from the centre of the town, and on the line of the contemplated railroad between Worcester and Gardner.

Said farm contains, 210 acres of land under a high state of cultivation, consisting of mowing, tillage, pasturage, and about 50 acres of woodland.

The mowing and tillage is of superior quality, and the place is well supplied with fruit trees in a bearing condition.

The buildings consist of a story and half house with an L wood-shed, barn, 80 by 40 feet; granary, horse-barn, carriage-house 60 by 20 feet, with many other convenient out-buildings, all nearly new and in good condition.

The stock and farming tools will be sold with the above, if desired. Terms made easy.

For further information apply personally or by letter to GEORGE ALDEN, 59 Milk Street, Boston.

March 12, 1853.

1f

The Farmers' Library.

JUST RECEIVED, the following assortment of Agricultural and Horticultural Books, embracing the standard works of eminent American and European writers, on the Farm, the Orchard, the Garden, &c. &c.

	PRICE.
American Farm Book, by Allen,	\$1.00
Farmer's Treasure, by Faulkner and Smith,	.75
Dana's Muck Manual,	1.00
Prize Essay on Manures, by Dana,	.25
American Muck Book, by Browne,	.25
Lectures on Practical Agriculture, by Johnstone,	.75
Elements of Scientific Agriculture, by Norton,	.50
Principles of Agriculture, by Thayer,	2.50
Practical Agriculture, by Johnstone,	.75
Agriculture for Schools, by Blake,	1.00
Catechism of Agriculture and Chemistry, by Johnstone and Norton,	.25
American Agriculturist, by Allen,	1.00
Liebig's Complete Work on Chemistry,	1.00
Farmer's and Emigrant's Hand Book, by Marshall,	.75
Home for all, by Fowler,	.50
Book of the Farm, by Stephens and Skinner,	4.00
Cottage and Farm Houses, by Downing,	2.00
Downing's Country Houses,	4.00
Rural Architecture, by Allen,	1.25
Downing's Landscape Gardening and Rural Architecture,	2.50
Downing's Cottage Residences,	2.00
Fruit Garden, by Barry,	1.25
Complete Gardener and Farmer, by Fessenden,	1.25
Bridgeman's Gardener's Assistant,	2.00
Bridgeman's Kitchen Gardener's Instructor,	.50
American Fruit Culturist, by Thomas,	1.00
Gardener and Complete Florist,	.25
Florist's Guide, by Bridgeman,	.50
New England Fruit Book, by Ives,	
Youatt and Martin on Cattle, by Stevens,	1.25
Rose Culturist,	.25
Johnson's Gardener's Dictionary, by Landreth,	1.50
Rural Economy, by Bousmangaat,	1.00
American Rose Culturist,	.25
Bigelow's Plants of Boston,	1.25
Genera of Plants of the U. S., by Gray, 2 vols.	12.00
Gray's Botany,	2.00
Farnell's Chemistry,	1.00
New England Farmer, by Cole,	1.00
Ladies' Guide and Skillful Housewife, by Mrs. Abel,	.25
Hive and Honey Bee, by Richardson,	.25
Bee Keeper's Manual, by Miner,	.50
Bird Fancier, by Browne, paper 25 cents,	.50
Townley on Bees,	.50
American Poultry Yard, by Browne,	1.00
American Poultryers' Companion, by Bement,	1.00
American Fowl Breeder, by Moore,	.25
American Herd Book, by Allen,	2.00
American Shepherd, by Morrill,	1.00
Domestic Animals, by Allen,	.75
Diseases of Animals, by Cole,	.50
Hints to Sportsmen, by Lewis,	1.25
Dadd's Anatomy and Physiology of the Horse,	1.00
Mason's Farrier and Stud Book, by Skinner,	1.25
Management of Sheep, by Canfield,	1.00
Youatt on the Pig,	.50
Knowlson's Complete Cow Doctor,	.25
Horse Doctor,	.25
Guenon's Treatise on Milch Cows,	.35
Treatise on Hot Houses, by Leuchars,	1.00
Allen on the Grape,	1.25
Schenck's Text Book,	.50
Breck's Book of Flowers,	.75
Downing's Fruit and Fruit Trees,	1.50
For sale at the Publishers' prices by RUGGLES, NOBLE	
MASON & Co., Quincy Hall, (over the Market,) Boston.	
Jan. 1, 1853.	tf

Super-Phosphate of Lime,

IN bags and barrels, made by C. B. DeBURG, a warranted pure and genuine article, with full directions for use. For sale by GEO. DAVENPORT, 5 Commercial, corner of Chatham St., Boston, agent for the manufacturer.
Also, for sale, Ground Bone, Bone Dust, Burnt Bone, Guano, and Grass Seeds of reliable quality.
March 26, 1853. tf

Suffolk Pigs.



Suffolk Pigs and Breeding Sows for sale, by GEORGE W. WILSON, Malden, Mass.
Also, to be seen the most perfect Boar in the country.
July 16, 1853. 6m

State Mutual Life Assurance Co. OF WORCESTER.

GUARANTEE CAPITAL, \$100,000.

Hon. JOHN DAVIS, President.

Hon. ISAAC DAVIS, } Vice
Hon. STEPHEN SALISBURY, } Presidents.

THIS Company was chartered in March, 1844, and commenced business on the first of June, 1845. Its business is conducted on the most economical principles.

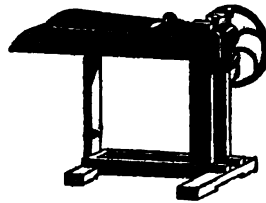
The well considered and invariable policy of this Company has been to prefer the safety and mutuality of the assured to the showy advantages of a large number of policies, and an imposing amount of receipts. California risks have been uniformly declined, and the multiplication of policies in cities considered especially liable to cholera has not been encouraged.

The cash premiums of this company are calculated on the most approved tables of the probability of life, and at the lowest rates which are deemed safe.

Pamphlets, explaining the principles and advantages of life assurance, with forms of application and rates of premium, may be had by application at the Office of the Company in Worcester, or of the Agents in all the principal towns in New England.

CLARENDON HARRIS, Secretary.

Jan. 1, 1853. tf



1000 IMPROVED Hay, Straw, and Corn Stalk Cutters, 2000 Martin's Improved green sward and stubble Plow,

100 Iron gate Hay Cutters,
200 Iron Sausage meat Cutters,
200 Sausage Fillers,
500 Improved Corn Shellers,
100 Fanning Mills,
500 Beal's Corn and Cob Crushers,
50 Vegetable Cutters,
1000 Apple Parers,
500 doz Ames, White & Nason's cast steel Shovels,
500 doz 4 and 6 prong Potato Hoes,
25 " Flails,
1000 " Cow Chains,
100 " Long and Heavy Ox Chains,
25 " sets Improved Grindstone Rollers,
1000 " Axes, various patterns,
5000 " Axe Handles.

For sale at the lowest prices, at PARKER & WHITE'S, Agricultural Warehouse, Nos. 8 and 10 Gerrish Block, 59 and 63 Blackstone Street, Boston.

Oct. 15.

6w

Imported Suffolk Pigs.



A choice lot of Suffolk Pigs just imported by the subscriber and for sale. This stock was selected by one of the most thorough breeders, and from the best in England. Also, Suffolk Pigs and Breeding Sows, of various ages, purely bred, from the importation of the late Wm. Stickney. Persons ordering from a distance can depend upon choice selections, by addressing post-paid,

LUTHER GILBERT,

Newton, Lower Falls.

August 6, 1853. tf

Church and Barn Vanes.

THE Vane as used on either churches or barns combines both usefulness and ornament. The subscriber has had many years' experience in the making of Vanes, and has manufactured a large number which have given uniform satisfaction. His patterns have been procured at much pains and expense, and embrace quite a variety of those most approved and sought after. His construction of Vanes is under his own eye and of the best and most durable material, copper only being used. Those who want of Vanes for either churches or barns, are invited to make trial of those made by the subscriber. On the score of expense, strength and beauty, they will be found to be what is required.

I. S. TOMPKINS,

54 (formerly 21) Union, near Hanover St., Boston.

May 21, 1853. 6m

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NEW ENGLAND FARMER

Is published on the first of every month, by JOHN RAYNOLDS and JOEL NOURSE, at Quincy Hall, South Market St., Boston.

SIMON BROWN, Editor.

FREDEBICK HOLBROOK, } Associate
HENRY F. FRENCH, } Editors.

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NEW ENGLAND FARMER, (WEEKLY.)

An Independent Agricultural Family Newspaper.

The News and Miscellaneous departments under the charge of WILLIAM SIMONDS, will include a full and careful report of the news of the Markets and the news of the week, such as Domestic, Foreign and Marine Intelligence, Congressional and Legislative proceedings, Temperance and Religious Intelligence, and a general variety of Literary and Miscellaneous matter, adapted to family reading, comprising more useful and valuable reading matter than any other Agricultural Newspaper published in New England. Everything of a hurtful or even doubtful tendency will be carefully excluded from its columns.

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The monthly contains nearly the same matter as the Agricultural department of the weekly

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[T] POSTAGE.—The postage on the New England Farmer monthly, is 14 cents per quarter, or 5 cents per year, to any part of the United States, to be paid in advance at the office where the same is received.

Extra Size Fruit Trees.



The Subscriber offers for sale at his Nurseries in Dorchester, THREE THOUSAND very large PYRAMID PEAR TREES on Quince roots. FIVE THOUSAND do. do. STANDARD PEAR TREES on their own roots.

Many of the above are now in fruit; all are remarkable for their strength and beautiful form, and, with proper care, will produce fruit next season.

Also, a general assortment of APPLES, CHERRIES, PLUMS, PEACHES, &c. &c. MARSHALL P. WILDER.

Sept. 16, 1863.

N. B. Grove Hall Coaches leave No. 11 Franklin Street, Boston, for Dorchester, several times each day.

Sept. 15.

511

Choice Fowls for Sale.



A few pairs of Ebon, Sumatra, Pheasant, Game, Black Spanish, Golden and Silver Pheasants, Aythya and Java Ducks. The above are warranted pure bred Fowls. The Pheasants are the bone-fide Pheasants, the old original parents, imported from China. All letters must be post paid to meet attention.

Oct. 23.

3w

JOHN GILES.

Stone Aqueduct Pipe.

THE Stone Aqueduct Pipe is made of the same material as Stone Pots and Stone Jugs, and coated with a glass that is indestructible, consequently is not liable to corrode, but will deliver the water as pure as it runs from the spring. It is made in sections of 2 feet in length, and warranted to stand the pressure of 300 feet head, for about half the cost of cast iron of the same calibre.

Also, Drain Pipe made of a combination of clays, and burned to a perfect body, from 3 to 12 inches diameter, from 10 to 55 cents per foot. Agents for Boston and vicinity, Ruggles, Nourse, Mason & Co., Quincy Hall.

B. G. & C. CHASE.

Boston, June 4, 1853.

17

PATENT

Self-Sharpening Feed-Cutters.

Manufactured and for sale by HIRAM BLACKMER, No. 5 Railroad Block, Lincoln Street, Boston, opposite Worcester R. R. Depot.

THIS Cutter is superior to any other Cutters now in use. For strength, durability and a simplicity of construction, it is the only self-sharpening Hay, Straw, and Cornstalk Cutter now before the public. It entirely obviates all the objections now made to the Rotary Cylinder Hay Cutter, viz: A number of knives to grind and set, and the constant wear of the hide roll, and the consequent expense attending the repairs of those Cutters. This Cutter has no hide roll, and but ONE STRAIGHT KNIFE, which any person can grind and set with ease; but which in ordinary cases can be ground in the machine, and may be used for years without any other grinding.

[T] A prime assortment of STOVES constantly on hand.

Oct. 15

2m

Peruvian Guano.

A FEW TONS, for sale by

JAMES GOULD,

Also, 100 bags Liverpool Salt.

No. 70 State Street.

May 14.





